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## Three Lines Get Charters For International Routes

Three airlines have been granted certificates by the Civil Aeronautics Board to fly the North Atlantic in international trade.

The award of the certificates was approved by President Truman as required by the Civil Aeronautics Act.

The grants for operation are restricted to seven years from effective date so that revisions and readjustments can be made should need arise as air-borne commerce develops among nations.

**Lines Given Certificates**—The certificates were issued to Pan American Airways, American Export Airlines and Transcontinental & Western Air. In a concurrent decision the Board approved acquisition of American Export by American Airlines.

Full operation of the new routes awaits approval by the countries concerned. In some cases this has been granted and activities on certain portions of other routes may begin, the Board believes, while diplomatic negotiations are pending.

Carrier inspection offices in connection with global air traffic are planned by the Civil Aeronautics Administration, subject to the availability funds. Locations presently under consideration are London, Stockholm and Lisbon where the CAA plans to establish personnel during the current fiscal year. A general inspector also may be stationed in London to handle applications from Army men for civilian pilot and mechanic certificates.

**Office at San Juan**—San Juan, Puerto Rico, is slated for an inspection office because it already has three airline routes in addition to operations north and south, which are expected to channel through the island.

The new international routes will provide additional service between the United States and Portugal, Spain, Eire, the British Isles, Scandinavian countries, Russia and other European countries, North Africa, the Near East and India. The termini in this country are New York, Boston, Philadelphia, Washington, Detroit and Chicago.

Pan American Airways is the only United States air carrier which has heretofore had permanent authorization for services across the North Atlantic. It holds certificates to operate through Bermuda and the Azores to Portugal and thence to London and to Marseille, and through Eire to London.

**Pan Am's Route Extended**—Under the present decision, Pan American's existing route to London

is extended through Europe and the Near East to Calcutta, India, via the following intermediate points: Brussels, Prague, Vienna, Budapest, Belgrade, Bucharest, Istanbul, Ankara, Beirut, Baghdad, Tehran, Karachi. Between Vienna and Istanbul some schedules will serve Budapest and Bucharest and others will serve Belgrade. Likewise, between Ankara and Karachi some schedules will serve Tehran and others will serve Beirut and Baghdad. Barcelona is added to Pan American's present route between Lisbon and Marseille.

American Export Airlines, operating under a (See *International Routes*, last page)

## CAA Sets Tentative Airport Spacing

To guide the thousands of communities now planning airports, the Civil Aeronautics Administration announces issuance of a set of recommended standards for space between airports.

The standards represent a revision of a tentative set circulated by the CAA for com-

### Production Certificates Manual

A manual has been prepared by the Flight Engineering and Factory Inspection Division of the Civil Aeronautics Administration, relating to Part 02 of Civil Air Regulations, which is an interpretation of the requirements for the issuance of production certificates. It is for sale, price 10 cents, by the Superintendent of Documents, Washington 25, D. C.

### CAA Offers Airports To Local Authorities In Forty-one States

More than 200 airports in 41 states, now leased by the Civil Aeronautics Administration as intermediate fields, are available to communities for use as municipal airports.

Any state, county or municipal government can take over any of these fields so located as to be convenient and useful to them, if they will agree to continue the field in operation in such a way that it is always available for emergency landings along the airways.

**Established as Emergency Fields**—Originally established as emergency fields by the CAA, these sites are essential airways facilities, and communities must agree to keep them available for emergency use.

The CAA has no objection to the city or town (See *Airports*, page 93)

### ment by the industry, and in general are more flexible.

The most controversial requirement in the preliminary draft—that airports at which instrument (bad weather) operations are to be conducted simultaneously will require 14-mile separation from center to center—has been eliminated in favor of a general statement that they will require “sufficient separation from center to center to prevent conflict and overlapping in the holding and approach patterns during simultaneous instrument approaches.”

In the case of smaller airports where flight is strictly “contact” (good weather) the earlier draft stated that traffic patterns should not conflict, and stated that a Class 1 airport had a traffic pattern of 2-mile radius, and a Class 2 airport had a 2½-mile pattern. The final version merely offers “as a general guide” a radius of only one mile for the pattern at a Class 1 field, and two miles at a Class 2 airport. The “contact” traffic patterns of Class 3 and Class 4 airports—those used for scheduled transport operations—are considered to have radii of three miles and four miles respectively in both drafts.

Full text of the recommendations appears on page 93.

# National Research Council Reports On Its Program For Training Pilots

Results of five years of pioneer research on the selection and training of aircraft pilots were reported recently to the Research Division of the Civil Aeronautics Administration.

The work done at approximately 40 universities and other centers, under CAA grants totalling about \$900,000, was summarized at the annual meeting of the National Research Council's Committee on Selection and Training of Aircraft Pilots, by Dr. Morris Viteles, Chairman.

The committee was welcomed by Charles I. Stanton, Acting Administrator of CAA, and Leonard Carmichael, Chairman of the Council's Division of Anthropology and Psychology.

**Reports Submitted**—In addition to Dr. Viteles' summary, the committee heard reports on current research at the Institute of Aviation Psychology, University of Tennessee, by R. Y. Walker and staff; on a study of fatal and near-fatal airplane accidents by R. Franzen and D. R. Brimhall; on consistency of student performance from flight to flight, by A. S. Thompson, H. S. Odberg, and E. S. Ewart; on effect of training on acuity of peripheral vision, by F. N. Low; and on the design of a study on the relationships between visual measures and flight performance, by W. R. Miles and Dr. Viteles.

At a luncheon session, informal addresses on the problems of aviation psychology were given by Commodore J. C. Adams, Chief of the Navy's Division of Aviation Medicine, and Major D. W. N. Grant, Army Air Surgeon.

**Dr. Brimhall Praised**—Dr. Viteles characterized the operation of the committee as "a striking example of research supported by a Federal agency which has allowed a unique amount of freedom from administrative restrictions while providing continuous stimulation and judicious suspension." For this, he said, "special credit is due Dr. Brimhall, CAA Director of Research."

Applying proved psychological testing tools and instruction methods to the field of aviation, the committee workers have been credited by the Army and Navy with increasing greatly the efficiency of military flight training. At the same time, Dr. Brimhall points out, "much of what we learned during war can become immediately useful during peace." For example, the Civil Aeronautics Board has asked that the committee use its objective methods of measuring pilot performance to study visual requirements for pilot certificates.

**Cost of "Screening" Low**—The scope of the committee's work is indicated by the operations of its National Testing Service. Through this service, centralized at the University of Rochester, some 67,000 candidates for training in the Army phase of the Civilian Pilot Training Program were "screened" by 609 cooperating examiners throughout the United States at the extremely low cost of \$1.12 per candidate.

In accordance with the changing needs of the military services, emphasis is now on training rather than selection, a phase which should have more widespread applications to civil aviation. An outstanding tool being used by the committee in improving training methods is the air-borne model of the magnetic wire recorder. Designed at the Armour Institute of Technology, the possibilities of the instrument were first recognized by the committee and the CAA Research Division, which stimulated its development and mass production, and in 1942 brought it to the attention of the armed forces.

Starting out by transmitting for recording on the ground the conversations between students and instructors, and later using the airborne recorder and camera, the committee was able for the first time to observe and evaluate flight instruction methods, leading to the first controlled "practice teaching" in avi-



Dr. Viteles

Dr. Brimhall

ation. It discovered that there was wide variation in instructors' vocabularies, that much instruction was given in the air which could better have been given on the ground, and that pilot training suffered from inadequate methods of presentation by instructors unaware of the fundamentals of good teaching procedures.

**Training Aids Developed**—These findings led to the development of two training aids of fundamental importance—the booklets, "Patter for Elementary Flight Maneuvers," presenting models of simple air instruction, and "Fundamentals of Basic Flight Maneuvers," outlining the basic facts which should be understood by the student pilot before going up.

These manuals were used not only in the CAA training program, but were adapted for the Navy and even were translated into Chinese. Admiral A. W. Radford reported "unanimous approval" by Naval flight personnel of the Navy manual, and declared it would be "of inestimable value in furthering flight training."

Committee personnel also developed a 30-hour course, designed to produce instructors who would be good teachers as well as good fliers. This has been used by the CAA, and made available to the Army, Navy and allied air forces. In addition, a compilation of some 300 effective instructor "tricks" has been prepared.

**Hidden Camera Proves Worth**—The committee research program was the first to develop and make field use of the "standard flight" as a technique in pilot evaluation. Another important aid to objective recording of pilot performance by instructors and inspectors is the hidden camera and instrument panel, including a special control movement recorder, developed by committee workers at the Universities of Pennsylvania, Rochester, and Tennessee. It is being

(See Research Council, page 93)

## 16 Airlines Honored By National Council For Safe Operations

The National Safety Council, announcing its 1944 aviation safety awards, reports that 16 American airlines completed their 1944 operations without a single fatal accident.

In the group comprised of lines which flew more than 100,000,000 passenger miles in the year, United Air Lines was the winner. Among the airlines flying from 10,000,000 to 100,000,000 passenger miles in 1944, Braniff Airways won the first place award and American Export Airlines received the award in the group of lines operating less than 10,000,000 passenger miles.

The 13 other airlines with perfect records but fewer passenger miles flown, earned certificates of safe operation. These include: Eastern Air Lines and Northwest Air Lines in the first group; Pennsylvania-Central Airlines Corporation, Delta Air Lines, Western Air Lines, Chicago and Southern Air Lines, Continental Air Lines, Mid-Continent Airlines, National Airlines, Northeast Airlines, Pan American Airways (Atlantic division), Hawaiian Airlines, Ltd., and Colonial Airlines in the second group. American Export was the only line in the third group operating with a no-fatality record.

## Allison is Building Jets For Both Army and Navy

Allison is building jet propulsion engines for the U. S. Navy in addition to jet engines now in production for the Army Air Forces' P-80 Lockheed Shooting Star. The first unit, scheduled for the Navy, was delivered not long ago.

The jet engines being built for the Navy are of a different type than those in production for the Army, thus representing a two-fold production job in jet engines that has been undertaken by Allison. Both engines are being produced to the basic design developed by the General Electric Company.

## New Parachute Developed

A PARACHUTE for which claims are made of greater precision in landings and the virtual elimination of oscillation has been tested by the United States Army, Navy and the Royal Canadian Air Force.

The pattern of the parachute's canopy is like the two halves of a baseball cover and when spread by air pressure a perfect hemisphere is formed instead of the parabola of the standard parachute.

Claims for the new "baseball" parachute, besides precision and absence of oscillation, include the advantage of launching from planes traveling at much greater speeds than would be safe for the standard type.

The new chute was developed and perfected by Leonard P. Frieder, president, and Walter Finken, chief engineer, of General Textile Mills.

## CAA Asks Industry To Aid In Examining For Pilots' Licenses

Preparing for a post-war increase in private flying which might swamp its force of 140 aeronautical inspectors, the Civil Aeronautics Administration is authorizing qualified individuals outside the CAA to give flight tests to applicants for private pilot certificates. At least 2,000 will be needed for this work.

These flight examiners will issue certificates good for 90 days, pending approval of regular two-year certificates by local CAA inspectors.

**Amendment change procedure**—An amendment to the Civil Air Regulations authorizing this step provided also that all pilot certificates, student, private and commercial hereafter issued, will be effective for two years.

The CAA is trying to arrange for at least one examiner at each of the estimated 2,000 "fixed base" operations, but will designate as many qualified persons as apply. They will retain their designation as long as they are qualified, regardless of where they may move.

**Permits \$5 fee**—In the past, examiners have been authorized for specified locations only. Another innovation permits the examiners to charge a fee of five dollars.

There were 260 flight examiners under the existing set-up, and it is estimated that they gave about one-third of the 10,081 private pilot flight tests administered by examiners or inspectors during the year which ended June 1, 1945. At least 2,000 examiners is the present goal.

Discussing the new procedure, Raymond B. Maloy, Acting Assistant Administrator for Safety Regulation in the absence of Fred Lanter, pointed out that the CAA was preparing itself well in advance to avoid any delays which would hinder the growth of private flying.

**Flood of Applicants Expected**—"At present," he said, "there is no backlog of applicants for flight tests; we are right up with the demand. There has been only a moderate increase in the number of flight tests for private certificates, from 785 in October, 1944, to 957 in March, 1945. However, there is evidence that the number of applicants will increase more sharply in the near future, since the number of student certificates issued in the same period rose from 1,800 a month to 4,672. We are, therefore, taking steps to increase the number of flight examiners eight-fold or more."

Examiners appointed under the old procedure will have to be re-designated. Each examiner will display an engraved certificate of appointment from the CAA.

Any applicant desiring to appeal the decision of an examiner may secure a flight test from a CAA inspector free of charge. Inspectors and examiners will give all applicants the entire flight test, even though they may fail in a particular maneuver. Maneuvers in which an applicant fails will be itemized, so that on re-examination he will be required to accomplish only these.

In addition to the flight test, applicants will be given a new type of written examination covering only Part 43 of the Civil Air Regulations, dealing with Pilot Operating Rules, and sections of Part 60 dealing with contact flight rules. The test will consist of 25 questions, and 80 percent will be the passing grade. In the past, a knowledge of navigation and meteorology was also required. The flight examiners will be authorized to administer and grade the written examinations.

## Two CAA Missions Study War Data For Benefit of Peacetime Aviation

Two Civil Aeronautics Administration missions are now abroad studying problems involving peacetime air commerce. Members of the two groups will literally meet in war's classrooms.

One CAA group, headed by Deputy Civil Aeronautics Administrator C. I. Stanton, is attending the Commonwealth and Empire Conference on Radio for Civil Aviation in London, England, having left late in July.

The other is making a world-around inspection of the U. S. Air Transport Command activities with a view of adapting them, wherever advantageous, to

improvement of the Madrid Airport in the interests of U. S. military and civil air operations.

**Completes Costa Rica Mission**—Meanwhile,



Fred M. Lanter

James L. Kinney

Chris M. Lample

peacetime air commerce. Fred M. Lanter, Assistant Administrator of Safety Regulation, is the ranking member of this party.

**Accompanies Deputy Administrator**—W. E. Jackson, Chief of the CAA Radio Development Section, accompanies Mr. Stanton. They will be part of a group of observers from interested U. S. agencies.

At the invitation of the Air Transport Command, Mr. Lanter is making the trip accompanied by Chris M. Lample, acting director of Air Navigation Facilities, and James L. Kinney, acting Director of Flight Operation Services. With them is Major Leonard N. Morris. This party will fly around the world and present plans call for their return the last of August.

Their route has been established to make possible inspection of the facilities installed by CAA for flying along the world's airways by the military services. These airways extend from Washington to Burma and from Manila and Australia to San Francisco. Throughout most of the trip, they will be using "made-in-America" airways aids, radio ranges literally transplanted from U. S. fields.

**Expected Back August 30**—Major stops along the route are Natal, Casablanca, Madrid, Paris, London, Rome, Athens, Cairo, Baghdad, Karachi, Calcutta, Kunming, Chengtu, Manila, Guam and Honolulu.

Expansion and extension of the airways now operated by the CAA, its services in inspection and regulation of U. S. and foreign air carriers serving U. S. territory, and cooperation with the aviation bodies of other nations will govern the activities of the mission. Conferences at many stops will be held with aviation representatives of other nations.

While the London conference is in session and the world wide mission is winging on its way, other representatives of the CAA are reporting on completion of assignments in foreign countries.

John E. Sommers, Aircraft Control Officer of CAA, has just returned from a trip to Spain, where he served on an Air Transport Command committee negotiating with the Spanish government for im-

Carl Posey, of the CAA Airports Service, is completing a mission as technical adviser on airport construction in Costa Rica. He will be succeeded in Costa Rica by Ward B. Masden of the CAA Safety Regulation Service, who will assist the government in drafting a code of civil air regulations.

Claude Sterling and Leon Donnelly, also of Safety Regulation, have just returned from a preliminary study of air transport needs in Uruguay, which has requested U. S. technical assistance in setting up a government-owned airline for operations within the country. All services furnished by the U. S. will be reimbursed, and the proposed airline would not be in competition with any U. S. carrier.

Alfred Hand, Chief of the CAA Division of International Activities, recently returned from a conference in Montreal with the Canadian Preparatory Committee for the Interim Council of the Provisional International Civil Aviation organization, which is to meet in August.

Gilbert B. Smith, Acting Superintendent of Safety Regulation for the CAA in the First Region, is leaving his New York post on assignment as liaison officer with Lt. Gen. Brett, commanding general, Caribbean Defense Command.

**Plan Foreign Offices**—Plans now are being worked out, subject to the availability of funds, for establishment during the current fiscal year of CAA offices in London, Stockholm, Lisbon, and San Juan, Puerto Rico. It is expected that it will be necessary to station air carrier inspectors in the first three of these offices as a result of recent Civil Aeronautics Board action in granting certificates for operations by three U. S. airlines across the Atlantic. A general inspector also may be stationed in London to handle applications for civilian pilot and mechanic certificates from Army personnel. Puerto Rico is slated for an office because it is already on three airline routes, and additional operations, northbound as well as southbound, are expected to channel through the island.

If sufficient funds are appropriated, the CAA hopes to set up offices at 17 foreign points by July, 1947.

## **Administrator Names Adviser-Consultants To Aid Private Flying**

Appointment of four regional adviser-consultants to put into operation the CAA policy of aiding and promoting the advancement of private flying is announced by T. P. Wright, Administrator of Civil Aeronautics.

The four appointed: Carl W. Clifford for region 2, Marshall E. Beeman for region 6, Roland Rohlfs for region 1, and Lester B. Littrell, region 5, are certificated pilots and veteran members of the staffs of the Civilian Pilot Training Program and the War Training Service. All four men are acknowledged specialists in the field and possess a wide knowledge and much experience in the problems of the private flier.

**Will Aid Organizations**—These advisers will aid in the organization of flying clubs, advise in the acquisition of airplanes, and suggest aerial tours with a view to increasing the usefulness and enjoyment of flying private aircraft. It also will be their responsibility to assist local organizations in planning air meets, and to represent the CAA at meetings of aviation clubs, civic groups, and at dedications of airports and airfields, and they will work towards increasing the public knowledge of advantages of private aircraft ownership.

Region 2, to which Mr. Clifford has been assigned, includes North Carolina, South Carolina, Tennessee, Georgia, Florida, Alabama, and Mississippi, with headquarters at Atlanta.

Mr. Clifford was born in Union City, Mich., April 8, 1902, and was graduated from Battle Creek, Michigan High School in 1922. He learned to fly in 1925 and has been flying ever since. For several years he was a ground and flight instructor, and from 1939-40 was in charge of the NYA Aviation Program of the Cassidy Lake Technical School at Chelsea, Mich. He joined the CAA in August of 1940 as a private flying specialist. Until his appointment as adviser, he had been serving as a superintendent of the WTS of the CAA. Mr. Clifford is married and has one child.

Region 6, to which Mr. Beeman has been assigned, includes California, Nevada, Utah, and Arizona, with headquarters at Santa Monica, Calif. Mr. Beeman was formerly the owner of Beeman Flying Service, Los Angeles, Calif. He was born in Sioux City, Iowa, March 1, 1908. He was an outstanding athlete at the University of Southern California, from which he graduated in 1932. He organized his flight school in 1939 and became a member of the CAA in September of 1940 with the position of ground school inspector. Later he became senior flight supervisor and assistant superintendent of War Training Service for the CAA. He was serving in this capacity at the time of his appointment as adviser on private flying.

Region 5 to which Mr. Littrell is assigned with headquarters at Kansas City, includes South Dakota, Nebraska, Kansas, Colorado, Wyoming, Missouri and Iowa.

Region 1 in which Mr. Rohlfs is located with headquarters in New York City includes the New England States, New York, Pennsylvania, Delaware, New Jersey, Maryland, Virginia and West Virginia.

**Six Years an Instructor**—Mr. Rohlfs has been a pilot for 30 years. In 1918 he broke the seaplane record in a special plane called the "Dunkirk Fighter." One year later, in a Curtis "Wasp," he broke the altitude speed and climb record. He flew airplane trips in "Fords" and spent six years instructing in Pitcairn autogyros.

He was born in Buffalo, N. Y., February 10, 1892. He graduated from Buffalo Technical School and took post-graduate work in chemistry and machine shop

## **Recent CAA and CAB Releases and Speeches**

Copies of CAA releases may be obtained from the CAA Office of Aviation Information. CAB releases and speeches are obtainable from the Public Information Section of the Board. Both offices are located in the Department of Commerce Building, Washington 25, D. C.

### **CAB Releases**

"CAA Testing Military Planes for Civilian Certificates."

"New Approach Control Demonstrated by Civil Aeronautics Administration."

"First State Law Allowing High School Flight Courses Passed in Wisconsin."

"CAA Believes Airworthiness Requirements Should Produce Better Personal Airplane."

"Landing Places in National Parks Urged by CAA Committee."

"CAA Tests Six Systems of Approach Light Aids."

"Information on the Small Airport."

"CAA Employees Serve War Effort All Over the World."

"World's Busiest Air Traffic Center Prepares for Peace."

"Tell Results of Five-Year Study on Pilot Selection and Training."

"ATC to Fly CAA Men Around World for Inspection."

"Schall Returns to CAA for Work in Foreign Field."

### **CAB Releases**

"CAB Examiner's Report on the Hawaiian Case."

"CAB Examiner's Report on the West Coast Case."

"CAB Grants Air Routes to Pan American Airways, Transcontinental and Western Air, American Export Airlines in the North Atlantic Decision."

"CAB Grants Acquisition of American Export Airlines by American Airlines, Inc."

"Board Adopts New Part 41 of the Civil Air Regulations."

"Board Modifies Provisions of new Part 60 of the Civil Air Regulations."

"Board Circulated Part 04 of the Civil Air Regulations to Industry for Comment."

### **CAB Speeches**

Address by L. Welch Pogue, Chairman, Civil Aeronautics Board, on July 9, before the National Aeronautic Association in Washington, D. C., entitled "National Program of Air Transportation Development."

Address by Mr. Pogue, on June 25, before the Philadelphia Chamber of Commerce, entitled "Tools of Aviation."

operation. He joined the CAA in December of 1940 as a ground school inspector. After a series of promotions he became a flight superintendent in the War Training Service of the CAA. He was serving in this capacity at the time of his appointment as adviser-consultant.

Mr. Littrell started his aviation experience in the Naval Air Corps in 1930. He was born in Centralia, Mo., May 25, 1903. He is a graduate of the University of California. He served four years in the Navy as an airplane and engine mechanic and completed additional studies at the Curtiss-Wright Technical Institute.

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**Henry A. Wallace  
Secretary of Commerce**

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**Q—Where may I obtain information on operation, construction and design of a small airport?—J. D.**

**A—The Office of Aviation Information of the Civil Aeronautics Administration has prepared such information, and while not complete it will prove helpful to persons contemplating building a small airport. Copies are available at the CAA Office of Aviation Information, Washington 25, D. C.**

**Q—When did the Willow Run bomber plant cease operations?—J. S.**

**A—Last deliveries, consisting of 21 planes, were made to the Army on June 30, 1945. Some time ago Henry Ford was reported to be considering the production of cargo planes and farm implements in the \$100,000,000 plants. Later, however, newspapers announced he had abandoned the project.**

**Q—Is there information available which will be helpful to members of the armed forces who wish to obtain CAA mechanics certificates?—C. P.**

**A—Yes. The Civil Aeronautics Administration has prepared a pamphlet containing full information on the subject. It will be supplied free to all interested persons by the CAA Office of Aviation Information, Washington 25, D. C.**

**Q—Where may I see the first jet-propelled plane built and flown in the United States?—J. G.**

**A—An experimental jet-propelled plane, built by the Bell Aircraft Corporation, which is believed to be the first constructed and flown in the United States is on display at the Smithsonian Institution, Washington, D. C.**

**Q—Is it possible by zooming to pass over obstacles at the end of the field which could not be cleared at the steepest rate of climb?—C. H. C.**

**A—Yes. The takeoff run will be longer and at a greater speed than for a normal ascent. The angle of climb will be sharper, during which speed will be lost.**

### **Air-Mail Rate to Russia Reduced**

The Postmaster General has announced reduction of the air mail postage rate from the continental United States, including Alaska, to the Union of Soviet Socialist Republics to 30 cents a half-ounce. The former rate was 70 cents a half-ounce.

## CAB First Report on 'Feeder Lines' Approves Establishing Service in Rocky Mountain Region

In the first report to be issued in a case involving "feeder lines," William J. Madden, Examiner for the Civil Aeronautics Board, on May 26, 1945, recommended that Summit Airways, Inc., and Ray Wilson, Inc., be authorized to operate feeder routes in the Rocky Mountain Region for a temporary period of three years.

Summit Airways, a Wyoming Corporation, which has engaged in war training activities and has been as a fixed base operator since 1941, was recommended to operate two routes, between Billings and Cheyenne, Wyoming, via Lovell, Powell, Cody, Greybull, Worland, Thermopolis, Riverton, Lander, Rock Springs, Rawlins and Laramie, and between the terminal point Rock Springs and the intermediate points Jackson, Afton, Kemmerer and Evanston. If awarded these routes by the Board, Summit plans to use aircraft comparable to the Beechcraft model 18-S.

**Routes Authorized**—Ray Wilson, Inc., is a Colorado Corporation. Ray Wilson individually has been engaged in various aeronautical activities in this area since 1929 including a flying school, student training activities, and charter services. The routes recommended for this operator, who also plans to use equipment comparable with the Beechcraft 18-S, are between Denver and Grand Junction, Colorado, via Granby, Steamboat Springs, Craig, Glenwood Springs and Rifle; between Denver and Grand Junction via Salida, Alamosa, Monta Vista, Gunnison, Montrose and Delta; and between Grand Junction and Salt Lake City via Price and Provo; and between Grand Junction and Albuquerque via Cortez, Durango, Farmington and Gallup.

**Temporary Service**—Western Air Lines, Inc., was included in the recommendations of the examiner to operate between Denver and Cheyenne, between Sheridan and Rapid City, to serve Logan, Utah and Jackson, Wyoming, on its route 19, and to serve Richfield, Cedar City and St. George, Utah, on its route 13 for a temporary period of three years.

The Rocky Mountain Region, covered by this report, is one of 10 regions of the United States, set up by the Civil Aeronautics Board for hearings and decisions on applications for new routes. This region covers Wyoming, Utah, Colorado, and part of Montana, Nebraska, Kansas, New Mexico, Arizona, Nevada and Idaho with approximately 2,000,000 people. Eighteen applicants participated in this proceeding, including 15 operators not now certificated by the Board and applying for feeder and pick-up certificates.

**Previous Opinion**—The general question of feeder and pick-up air service was discussed in the Board's opinion of July 11, 1944, "Investigation of Local Feeder and Pick-up Air Service" issued after public hearings had been held and an examiner's report made. The Board in that opinion stated that the provision of short-haul and local services with aircraft will be an experimental operation, but that since the experiment may well result in public benefit beyond present expectations, there was justification, in translating into results of experience what are now plans and estimates. The Board felt that granting temporary certificates for short periods, such as three years, would be sufficient to judge the potentialities of such services, and that such authorization should be confined to operations which show a justifiable expectation of success at a reasonable cost to the Government.

Examiner Madden stated in his report that mail compensation at 35 cents per mile would probably be necessary and that for the first year of operation of the two feeder routes recommended, total mail payments would amount to approximately \$580,000 for one round trip per day. The extent to which this mail compensation may diminish in subsequent

years, due to the increasing use of the services and the resulting public benefits, will have to be examined and determined after a reasonable period of operations.

## President Truman Meets Latin American Class

In a recent visit to Kansas City, Mo., President Truman greeted members of the class of young men from Latin America who are receiving aviation training at the University of Kansas City. This group is specializing in aircraft communications which is one phase of the Inter-American training



program, sponsored by the Civil Aeronautics Administration and other Federal agencies.

President Truman is shown on the steps of the University of Kansas City shaking hands with Everett Watt, one of the instructors there.

The program was started in 1942 when the first contingent of Latin-American trainees, numbering 484, arrived in the United States and matriculated for instruction at Newark, N. J., Miami, Fla. and Glendale, Calif.

## CAB Approves Increased Alaskan Air Mail Service

The Civil Aeronautics Board announces it has authorized Alaska Airlines, based at Anchorage, to carry mail between Fairbanks and Anchorage. Woodley Airways, also based at Anchorage, was given permission to carry persons, property and mail between Anchorage and Kodiak, via Homer.

The Postmaster General certified to the Board the need for mail service between Fairbanks and Kodiak via Anchorage and Homer.

Alaska Airlines has previously been authorized to operate air service for passengers and property between Fairbanks and Anchorage and between Anchorage and Seldovia. Woodley is authorized to transport passengers, property, and mail between Anchorage and Ninilchik and has given mail service to Homer under a special exemption order.

## Mexican Airline Gets Permission of CAB To Use Texas Field

The Civil Aeronautics Board, in an opinion approved by President Truman, has granted Aero-Transportes, S. A., a Mexican airline, permission to use the airport at Brownsville, Tex., as a terminal point on its route from Monterrey, Mexico.

The Brownsville airport will be used instead of the Matamoros, Mexico, airport, the authorized terminal point on this route, as the Matamoros airport is inadequate for the type of equipment now being operated by Aero-Transportes.

**Permit for One Year**—The temporary permit authorizes operations into Brownsville for one year from the date of approval. Aero-Transportes plans to file application for permanent operation into Brownsville within this period.

However, the Board held that inasmuch as the necessity for this permit is the result of unsafe conditions at the Matamoros airport for the equipment now being used by Aero-Transportes, the issuance of the temporary permit will not be recognized as constituting any basis for a future claim of permanent operating rights.

**Important Service**—Aero-Transportes is the only Mexican airline between Monterrey and Matamoros and permission to use the Brownsville airport, just across the international boundary, will make possible the performance of an important service by a Mexican carrier.

## Continental Authorized To Expand Its Service

The Civil Aeronautics Board, by supplemental opinion, has granted Continental Airlines authority to conduct air transportation from Hobbs, N. Mex., to Tulsa, Okla., by way of Lubbock and Wichita Falls, Tex., and Oklahoma City. Since Continental is now authorized to operate between Hobbs and El Paso, this authorization will make possible through service from El Paso to points on the new route.

The application of American Airlines to include Wichita Falls and Lubbock on its route 4 between Oklahoma City and El Paso was denied by the Board.

This supplemental opinion is the result of reopening the proceeding concerning Memphis-Oklahoma City-El Paso service, decided by the Board on November 10, 1944. The case was reopened only for reargument of the issues concerning service to Wichita Falls and Lubbock, for which American and Continental were applicants.

The Board decided the air service is necessary between Lubbock and Wichita Falls to and from Oklahoma City, Tulsa, and El Paso after a re-appraisal of existing transportation facilities, particularly in relation to the commercial importance of these cities to their surrounding areas, and their relative positions in the oil and cotton industries.

The opinion states both Continental and American are fit, willing and able to furnish air transportation through Wichita Falls and Lubbock, but believes that the "development of air traffic at these relatively small cities will receive more intensive efforts from a carrier such as Continental, which is more vitally dependent upon such traffic, than by American. Development by the latter company would be likely to be incidental to the development of the longer haul traffic over the new route."

# Domestic Air Carrier Statistics

## Operations for June 1945

*Prepared from official reports, submitted by the air carriers listed, to the Civil Aeronautics Administration and the Civil Aeronautics Board*

Operator and routes	Revenue miles flown	Revenue passengers carried <sup>1</sup>	Revenue passenger miles flown	Express carried (pounds)	Express pound-miles flown	Passenger seat-miles flown	Revenue passenger load factor (per cent)
	135,225	0	0	16,307	2,328,495	0	—
All American Aviation, Inc., Pittsburgh-Huntington, Jamestown, Williamsport, Harrisburg, Washington . . . . . Total	4,016,444	113,914	69,327,950	2,571,613	1,376,019,341	74,150,201	93.50
Dallas-Los Angeles . . . . .	23,456	22,751,036	307,806	314,317,900	23,383,532	97.30	
New York-Chicago . . . . .	595,245	9,663,459	922,227	423,376,082	10,352,958	93.34	
Boston-New York . . . . .	25,582	5,493,393	427,482	6,179,750	6,255,650	87.81	
Cleveland-Nashville . . . . .	310,651	7,143	1,772,946	116,814	26,945,149	1,984,184	90.26
New York-Fort Worth . . . . .	95,531	7,143	1,772,946	116,814	26,945,149	1,984,184	90.26
Washington-Chicago . . . . .	1,150,803	33,547	19,309,103	523,256	358,920,820	20,523,281	93.82
Chicago-Fort Worth . . . . .	169,360	7,466	3,008,391	114,155	57,122,262	3,223,748	93.32
Chicago-Fort Worth . . . . .	229,720	8,284	4,113,534	99,621	53,460,671	4,591,030	89.60
Buffalo-Toronto . . . . .	4,263	1,046	77,079	4,131	299,316	89,304	86.31
El Paso or Fort Worth-Mexico City . . . . .	191,513	3,634	3,139,009	55,831	48,117,115	3,709,494	84.62
American Airlines, Inc. . . . . Total	626,268	27,332	11,708,264	170,093	85,521,720	12,574,899	93.11
Dallas-Chicago . . . . .	350,260	13,278	6,672,152	113,172	69,725,654	6,958,362	95.89
New York-Chicago . . . . .	242,108	13,500	4,441,835	48,743	14,485,897	4,936,917	89.97
Denver-Brownsville, Amarillo-Oklahoma City . . . . .	33,900	3,476	594,277	8,178	1,310,169	679,620	87.44
Chicago & Southern Air Lines, Inc. . . . . Total	471,811	17,231	8,156,103	161,517	72,436,597	9,851,465	82.79
Chicago-New Orleans . . . . .	242,237	10,776	4,419,302	107,020	49,204,519	5,043,801	87.62
Memphis-Houston . . . . .	229,574	8,534	3,736,801	54,497	23,232,078	4,807,664	77.73
Continental Air Lines, Inc. . . . . Total	362,730	12,528	4,966,497	39,232	17,112,846	6,176,566	80.41
Denver-El Paso-San Antonio . . . . .	221,038	7,365	2,732,234	21,158	7,977,065	3,586,616	76.74
Pueblo-Tulsa . . . . .	34,320	2,072	594,743	4,109	1,416,579	710,098	83.05
Denver-Kansas City . . . . .	107,372	3,091	1,619,520	13,965	7,719,202	1,873,852	86.43
Delta Air Corporat <sup>1</sup> . . . . . Total	500,003	23,992	9,300,216	124,325	44,292,700	10,412,822	89.32
Charleston or Savannah-Fort Worth . . . . .	431,328	20,159	7,978,619	74,033	30,532,771	8,970,651	88.88
Atlanta-Cincinnati . . . . .	68,675	4,131	1,321,597	50,292	13,759,929	1,436,171	92.02
Eastern Air Lines, Inc. . . . . Total	2,246,133	76,184	38,776,714	733,949	456,205,188	43,730,029	88.67
Boston-San Antonio or Brownsville . . . . .	753,778	26,047	13,434,892	198,827	138,002,069	14,975,292	89.71
Boston-Miami . . . . .	797,698	27,381	12,776,630	275,965	202,235,760	14,073,688	87.07
Chicago-Jacksonville . . . . .	340,167	15,896	6,525,841	187,597	78,193,509	6,757,615	96.57
Atlanta-Miami . . . . .	250,290	9,808	4,191,438	25,248	15,374,115	5,253,774	80.05
Washington-St. Louis . . . . .	104,200	4,718	1,847,913	46,312	22,399,675	2,087,660	88.52
Inland Air Lines, Inc. . . . . Total	136,668	4,708	1,527,781	9,812	1,859,412	1,892,377	80.73
Denver-Great Falls . . . . .	101,448	1,284,553	9,396	1,730,471	1,569,713	81.83	
Cheyenne-Huron . . . . .	35,220	953	243,226	416	108,941	322,664	75.38
Mid-Continent Airlines, Inc. . . . . Total	233,160	12,046	3,250,574	28,756	8,951,343	4,008,028	81.10
Minneapolis-Tulsa . . . . .	132,060	7,112	1,849,656	21,695	6,571,943	2,316,116	79.86
Minneapolis-Des Moines, St. Louis or Kansas City . . . . .	101,100	5,070	1,400,918	7,061	2,379,400	1,691,912	82.80
National Airlines, Inc. . . . . Total	559,005	13,266	6,997,190	43,946	25,997,813	7,647,018	91.50
New York-Key West via Miami . . . . .	368,907	9,096	4,580,041	24,552	18,443,830	4,997,369	91.65
Jacksonville-New Orleans . . . . .	190,098	6,202	2,417,149	19,394	7,553,983	2,649,649	91.23
Northeast Airlines, Inc. . . . . Total	206,662	17,850	3,769,379	58,369	10,453,362	4,717,428	79.90
Boston-Presque Isle and Moncton . . . . .	83,504	6,746	1,406,862	15,109	2,629,304	1,921,410	73.22
Boston-Montreal . . . . .	28,714	2,372	464,431	4,122	626,571	632,871	73.38
Boston-New York . . . . .	94,444	10,354	1,808,086	39,138	7,197,487	2,163,147	87.75
Northwest Airlines, Inc. . . . . Total	1,061,506	26,765	18,991,381	316,326	189,045,816	21,161,028	89.41
Chicago-Twin Cities-Seattle; Fargo-Winnipeg . . . . .	797,815	24,444	14,649,276	245,915	144,642,924	16,231,164	90.25
Minneapolis-Duluth . . . . .	6,912	0	0	250	33,750	—	
Minneapolis-New York . . . . .	256,779	5,996	4,270,105	70,181	44,369,142	4,929,864	86.62
Pennsylvania-Central Airlines Corporation . . . . . Total	881,141	65,861	16,314,082	714,839	149,800,755	18,347,156	88.92
Norfolk-Detroit . . . . .	522,510	44,531	9,991,776	415,986	84,839,050	10,868,287	91.94
Detroit-Milwaukee or Chicago . . . . .	235,058	21,735	4,392,096	208,328	41,049,407	4,927,595	89.13
Pittsburgh-Buffalo . . . . .	25,027	2,017	396,060	34,347	6,630,164	517,490	76.53
Pittsburgh-Birmingham . . . . .	425,543	12,009	6,096,006	359,669	189,199,369	6,445,414	94.58
Washington-Buffalo . . . . .	121,466	8,211	2,083,001	148,527	23,981,254	2,489,071	83.69
St. Louis-Detroit via Cincinnati and Dayton . . . . .	97,170	5,437	2,000,384	55,593	19,158,505	2,255,573	88.69
Washington-Dayton via Columbus . . . . .	21,428	1,246	309,110	10,516	1,584,156	449,628	77.33
Pittsburgh-Boston . . . . .	94,267	3,356	1,536,438	50,984	1,013,632	449,628	68.75
Transcontinental & Western Air, Inc. . . . . Total	2,860,161	51,314	49,909,998	1,628,211	813,243,358	53,163,499	93.38
New York-Los Angeles . . . . .	1,844,861	42,992	32,756,832	904,481	521,240,364	34,414,085	95.18
Dayton-Chicago . . . . .	59,134	4,966	1,239,224	58,329	13,468,488	1,373,526	90.22
Winslow-San Francisco . . . . .	217,720	10,574	4,198,013	50,626	10,929,672	4,312,178	97.35
Kansas City-Pittsburgh via Chicago . . . . .	42,543	2,017	396,060	34,347	1,029,164	2,489,071	94.58
St. Louis-Detroit via Cincinnati and Dayton . . . . .	77,118	3,728	1,225,040	45,662	16,268,502	1,584,156	77.33
Washington-Dayton via Columbus . . . . .	1,248	1,246	309,110	10,516	1,013,632	449,628	68.75
Pittsburgh-Boston . . . . .	94,267	1,857	1,536,438	50,984	26,265,706	1,873,652	82.00
United Air Lines, Inc. . . . . Total	3,284,561	65,357	51,972,617	1,225,733	974,943,595	33,375,673	97.37
New York-San Francisco . . . . .	2,389,631	35,869	34,480,732	908,930	841,544,692	35,523,197	97.07
Salt Lake City-Seattle . . . . .	187,155	6,324	3,697,438	56,895	35,673,346	3,790,626	97.54
Seattle-San Diego . . . . .	546,457	25,354	10,739,685	135,307	62,774,254	10,884,915	98.64
Seattle-Vancouver . . . . .	17,040	2,300	327,320	5,117	664,826	339,080	96.53
Washington-Toledo . . . . .	71,314	1,934	1,390,426	13,154	5,182,676	1,419,188	97.97
Cleveland-Boston . . . . .	72,964	1,857	1,536,438	50,984	26,265,706	1,873,652	94.44
Western Air Lines, Inc. . . . . Total	450,567	19,097	8,364,479	130,205	61,695,322	9,353,228	89.64
San Diego-Salt Lake City . . . . .	255,280	9,746	4,786,066	101,210	52,623,930	5,384,727	89.72
Salt Lake City-Great Falls . . . . .	63,335	2,897	1,029,582	4,109	979,194	1,320,501	77.97
Great Falls-Lethbridge . . . . .	9,900	804	112,895	670	100,912	205,257	55.00
Los Angeles-San Francisco . . . . .	122,052	6,916	2,455,936	24,216	7,991,280	2,492,683	98.53
Total	18,032,045	549,163	303,281,125	7,973,233	4,289,907,663	330,561,417	91.75
Caribbean Atlantic Airlines, Inc., San Juan-Mayaguez and Christianstad Total	30,225	3,134	178,113	26,264	2,759,202	411,195	40.88
Colonial Airlines, Inc., New York-Montreal . . . . . Total	148,892	8,415	2,588,278	26,685	8,115,658	3,090,612	83.75
Hawaiian Airlines, Ltd., Honolulu-Hilo and Port Allen . . . . . Total	103,506	14,480	2,075,597	452,530	68,832,830	2,218,080	93.58
Grand Total	18,314,668	575,492	308,123,113	8,478,712	4,369,615,353	336,281,304	91.63

<sup>1</sup> The total passengers carried for each airline is an unduplicated figure.

<sup>2</sup> Does not include 376 charter trip miles.

## Domestic Air Carrier Statistics—Continued

*Operations for First 6 Months of 1945 as Compared with Same Period of 1944*

Operator	Revenue miles flown January-June		Revenue passengers carried (unduplicated) January-June		Revenue passenger miles flown January-June			
	1945	1944	1945	1944	1945	1944		
All American Aviation, Inc.	702,459	541,795	0	0	0	0		
American Airlines, Inc.	21,882,122	14,770,437	573,684	391,444	353,867,589	239,125,570		
Braniff Airways, Inc.	3,541,033	2,177,399	142,809	87,904	61,819,559	37,457,718		
Chicago & Southern Air Lines, Inc.	2,194,298	1,099,344	75,080	41,291	34,270,378	18,836,023		
Continental Air Lines, Inc.	1,637,900	994,999	49,935	26,945	19,876,019	9,237,915		
Delta Air Corporation	2,610,119	1,434,313	117,238	67,825	46,207,413	27,076,486		
Eastern Air Lines, Inc.	12,223,545	7,421,968	388,232	198,721	205,692,202	114,778,377		
Inland Air Lines, Inc.	830,554	479,427	27,118	7,723	8,778,723	2,532,076		
Mid-Continent Airlines, Inc.	1,340,655	1,045,426	56,638	32,610	15,190,208	9,327,649		
National Airlines, Inc.	2,836,654	1,436,290	71,347	52,500	34,419,788	17,178,937		
Northeast Airlines, Inc.	775,005	470,459	54,851	21,978	11,488,180	5,256,702		
Northwest Airlines, Inc.	5,099,865	2,870,952	131,375	65,943	85,897,239	44,406,468		
Pennsylvania-Central Airlines Corporation	4,575,202	1,858,951	312,771	143,057	73,461,714	31,932,392		
Transcontinental & Western Air, Inc.	14,453,856	9,181,856	239,932	164,090	228,805,759	141,117,391		
United Air Lines, Inc.	17,879,620	13,075,291	305,727	254,532	260,681,806	201,748,365		
Western Air Lines, Inc.	2,418,511	1,292,726	96,420	47,349	42,263,428	22,790,067		
Total	95,001,398	60,151,633	2,643,157	1,603,700	1,482,720,005	922,802,136		
Index (1944 = 100)	157.94	100.00	164.82	100.00	160.68	100.00		
Caribbean Atlantic Airlines, Inc.	113,173	108,600	10,789	10,131	722,541	696,094		
Colonial Airlines, Inc.	711,953	392,722	34,806	21,466	10,799,555	6,663,278		
Hawaiian Airlines, Ltd.	516,263	437,493	64,478	50,283	9,202,106	7,179,725		
Grand Total	96,342,787	61,090,448	2,753,230	1,685,580	1,503,444,207	937,341,233		
Index (1944 = 100)	157.71	100.00	163.34	100.00	160.39	100.00		
Operator	Express carried (pounds) January-June		Express pound-miles flown January-June		Passenger seat-miles flown January-June		Revenue passenger load factor (percent) January-June	
	1945	1944	1945	1944	1945	1944	1945	1944
All American Aviation, Inc.	81,002	53,399	12,988,933	7,686,394	0	0	—	—
American Airlines, Inc.	15,777,010	9,708,444	7,832,396,678	4,541,526,051	395,012,950	268,250,889	89.58	89.14
Braniff Airways, Inc.	1,090,925	519,669	535,151,257	236,382,905	70,407,344	40,853,393	87.80	91.69
Chicago & Southern Air Lines, Inc.	905,211	478,799	386,566,949	192,734,799	45,200,624	22,364,261	75.82	84.22
Continental Air Lines, Inc.	220,832	80,353	101,393,554	33,726,884	25,682,891	11,033,869	77.39	83.72
Delta Air Corporation	653,464	435,506	246,297,057	162,578,492	54,066,550	29,611,849	85.46	91.44
Eastern Air Lines, Inc.	4,294,015	2,240,750	2,506,325,605	1,488,413,054	236,227,545	132,265,400	87.07	86.78
Inland Air Lines, Inc.	51,013	13,081	11,786,722	2,696,889	12,491,067	3,633,316	70.28	69.69
Mid-Continent Airlines, Inc.	206,521	100,786	60,407,368	25,869,624	22,220,601	12,868,402	68.36	72.48
National Airlines, Inc.	274,640	221,556	144,145,394	76,657,847	37,964,597	19,729,382	90.66	87.07
Northeast Airlines, Inc.	164,297	55,623	30,494,025	11,448,082	17,462,724	9,733,688	65.79	53.67
Northwest Airlines, Inc.	1,550,960	952,307	884,187,036	498,548,569	99,707,195	53,005,120	86.15	83.78
Pennsylvania-Central Airlines Corporation	4,169,030	2,001,623	890,572,951	371,725,189	93,816,695	38,705,329	78.30	82.50
Transcontinental & Western Air, Inc.	9,671,249	5,729,816	5,108,316,957	2,970,011,211	254,627,681	156,452,284	89.86	90.20
United Air Lines, Inc.	6,479,812	4,928,565	5,243,000,289	3,686,400,612	273,220,183	210,790,254	95.41	95.71
Western Air Lines, Inc.	689,561	442,740	326,377,739	228,112,680	48,847,332	26,311,844	86.52	86.62
Total	46,279,542	27,693,017	24,320,408,514	14,534,519,282	1,686,955,981	1,035,669,280	87.89	89.10
Index (1944 = 100)	165.50	100.00	167.33	100.00	162.98	100.00	98.64	100.00
Caribbean Atlantic Airlines, Inc.	146,261	89,764	12,349,315	6,738,816	1,136,685	958,032	63.57	72.66
Colonial Airlines, Inc.	112,048	91,442	33,522,659	27,815,490	14,912,883	8,181,784	72.42	81.44
Hawaiian Airlines, Ltd.	3,374,513	3,448,760	517,543,334	535,509,939	9,754,224	7,652,664	94.34	93.81
Grand Total	49,912,364	31,592,983	24,883,823,822	15,104,583,527	1,712,759,773	1,052,461,760	87.78	89.06
Index (1944 = 100)	157.99	100.00	164.74	100.00	162.74	100.00	98.56	100.00

<sup>1</sup> Preliminary. Due to the delay in reporting by some companies, these figures are subject to revision in subsequent publications.

### CAA Prepares Booklet

#### To Assist Service Men

A pamphlet giving all information pertaining to applicants for mechanics licenses has been prepared for general distribution by the Civil Aeronautics Administration. Because of the steadily increasing inquiries from aviation mechanics in the armed forces who wish to continue the same type of work when they return to civilian life, the Civil Aeronautics Administration has condensed the information and made it available to mechanics in service and civilians.

The pamphlet lists all pertinent parts of CAR 24 which governs the licensing of airplane and engine mechanics, lists the bulletins necessary for proper study, and explains the procedure to be followed for taking examinations and obtaining a license.

### Oxygen Mask Given Test

#### On Record Height Flight

An unofficial altitude record of 44,940 feet is announced by Lockheed Aircraft. The flight was made from Wright Field, April 30, 1943.

The pilot was Joe Towle, and he was accompanied by Col. Randolph Lovelace, chief of the Army's aeromedical laboratory. The purpose of the experiment was to test a new mask which forces oxygen into the lungs.

Towle reported 45,000 feet as the altitude set, but 60 feet short of that he said, "trouble developed in the outside temperature gauge," and the piggyback Lightning fighter, P-38, was forced down after having been in the air a little more than an hour on the testing flight.

### United Air Recommended

#### For Honolulu Certificate

Two examiners of the Civil Aeronautics Board, Thomas L. Wrenn and Lawrence J. Kosters in their report on Docket 851, The Hawaiian Case, recommended to the Board that United Air Lines be certified to fly from San Francisco and Los Angeles to Honolulu.

Pan American Airways now holds a certificate for service between these points on two of its international services. The examiners stated in their opinion that competitive service between the Mainland and Hawaii would be in the public interest, and that United Airlines, conclusively establishes the fact that it is fit, willing and able to perform the transportation sought.

**National Airport Accident**—Engine failure is given as the probable cause of the crash of the Page Airways plane at the Washington National Airport, April 27, in which six passengers were killed and five seriously hurt.

The report of the Civil Aeronautics Board says power was lost just after the take-off and the captain landed straight ahead. The plane bounced three times before maintaining ground contact and then rolled into a drainage ditch where it burned.

The plane was flown by Captain John W. Decker and his copilot was Edwin A. Sanford.

Decker, 30, held a current airline transport pilot certificate with ratings for single and multi-engine land airplanes up to 3000 hp. His last physical examination required by the Civil Air Regulations was passed on Nov. 2, 1944. He had flown about 3,115 hours of which some 65 hours had been for Page Airways in the aircraft involved. Decker was employed by Page Airways on April 3, 1945. He had a diversified aeronautical background including about two years as copilot on a scheduled air carrier and one and one-half years as a test pilot for an aircraft manufacturer just prior to going with Page Airways.

Sanford, 30, held a currently effective commercial pilot certificate with ratings for single-engine land airplanes up to 340 hp., instrument and flight instructor. His last physical examination required by the Civil Air Regulations were passed on Mar. 29, 1945. He had flown about 2600 hours. Sanford was employed by Page Airways on April 22, 1945, and the flight from Miami to Washington was his first for that company.

Examination of the wreckage disclosed no indication of failure of the aircraft's structure or flight controls. Inspection of the braking system showed that the brakes had functioned normally. This was further substantiated by normal braking during the landing at Washington. However, there had been a power-plant failure.

Examination of the right engine showed that the upper valve spring washer of the intake valve on No. 1 cylinder had failed. It had cracked radially allowing the split type valve locks to be forced out and the valve to go within the cylinder, an occurrence known as "swallowing a valve."

Spark plugs of both engines had gaps which were close to the accepted maximum of .020 inches. Two of the spark plugs of the left engine were found to be defective. Spark plugs of the other engine were so damaged by fire that their prior electrical efficiency could not be determined. However, two had gaps of almost .030 inches.

It appeared that the Army overhauls and the subsequent maintenance of the engines had not been up to usual commercial standards, as evidenced by the fact that the valve mechanism assemblies throughout both engines were not uniform in assembly or parts. Throughout both engines washers of a condemned type were found.

**Pilot Blames Himself**—During a landing approach Cecil Revis Ferguson, of Dallas, Tex., hit a telephone wire and fell to the ground. He sustained serious injuries and the plane was badly damaged.

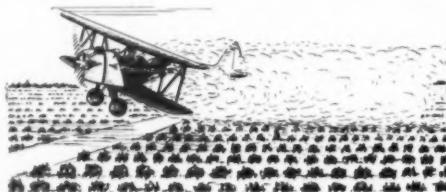
Ferguson said that the plane was functioning normally at the time of the accident which he said was due to his failure to observe the wire.

Ferguson, 37, held a student pilot certificate and had flown approximately 340 hours including 70 in the type airplane involved.

**Pilot Fatigue**—After having been flying continuously for about seven hours dusting an oat field, Derwood James Willis of Pine Bluff, Ark., collided with a tree and was fatally injured. The accident

occurred near Chicot, Ark. A contributing factor in this accident may have been pilot fatigue.

Willis, 32, held a commercial pilot certificate with single-engine land O-330 hp and flight instructor



ratings. He had flown about 2200 hours including about 120 hours of crop dusting all in the type of aircraft involved.

Investigation disclosed no evidence of malfunctioning of the airplane, the engine, or other components. There was ample fuel. The remaining dust load was about 75 lbs. The gross weight limitations for the aircraft were not exceeded.

**Crashes Into Bluff**—Caught in turbulent air and with his fuel exhausted Richard Mussey, Del Rio, Tex., lost control of his plane and was tossed against a bluff sustaining mortal injuries. The plane was destroyed.

Mussey, 26, held a student pilot certificate and had flown about 75 solo hours including four in the type aircraft involved.

Investigation disclosed no indication of mechanical failure of any part of the aircraft. The total flight time corresponded closely with the time interval when the aircraft's fuel—an original capacity of 13 gallons—would be exhausted and investigation disclosed this to be the case. The terrain in the vicinity of the accident is brush-covered and rocky and although not suitable for a safe landing it is believed a landing could have been made with only minor damage to the airplane. The wind at the time of the accident was blowing from the southeast almost directly toward the high bluff on the west side of the river. It is estimated that gusts of from 40-50 mph interspersed with periods of calm may have existed along this bluff at the time of the accident. It could not be determined definitely whether the airplane was stalled just prior to the crash or whether a sudden strong gust caused the pilot to lose control.

The probable cause of this accident was loss of control of the aircraft while maneuvering for a forced landing.

**Engine Fails on Take-off**—Dennis Edward Graham, an instructor of Jacksonville, Fla., was killed, and Robert O. Gordon, a student, was seriously injured in an accident near Hart Field. The cause given was engine failure during the take-off climb.

Graham, 29, held a commercial pilot certificate with single-engine land, O-80 hp and flight instructor ratings. He had flown approximately 1268 solo hours all in the type plane involved. Gordon, an aircraft instrument mechanic attached to the Naval Air Station, Jacksonville, occasionally obtained instruction on commercial airplanes at Hart Field.

The loss of power occurred about 250 feet above a highway with high trees ahead leaving the pilot the alternative of turning either right or left to land on the highway or continuing straight ahead into the trees. The student stated that he relinquished the controls when the trouble occurred and asked the instructor: "You got it?" He stated that the instructor neither answered nor moved. The maneuvers following loss of power do not reflect the actions of a pilot of Graham's experience and there is a possibility that he may have been incapacitated.

**Report on Memphis Accident**—An exhaustive study of all available evidence failed to disclose the cause of the accident near the Memphis Airport which resulted in the death of 21 passengers and the crew of three.

Whatever the trouble may have been, it must have developed very quickly for there was an interval of only nine minutes between the time of the accident and the last radio contact with the American Airlines plane, en route from Little Rock, Ark., and Memphis, Tenn., which plunged into the Mississippi River about 18 miles from its destination.

Only about 75 percent of the wreckage of the plane was recovered from the river and much of it was in such condition as to afford little information as to what its condition might have been prior to the accident.

During the investigation two feathers, one from a Lesser Scaup Duck and another from a Snowy Owl were found and consideration was given to the possibility that the birds smashed through the windshield, incapacitating both pilots.

The Board findings on this accident which occurred in February of last year follow:

An examination of such parts as were recovered gave no evidence of mechanical failure of the aircraft, the engines or the propellers.

The plane lost altitude with considerable forward speed and with at least some power from both engines until it struck the water at an angle of approximately 20°.

There was no fuel shortage.

The flight had proceeded normally up to the time of its last radio contact.

When the airplane was within 2½ miles of the scene of the accident it was observed flying at an altitude lower than normal for that point. There was no evidence to indicate how long the airplane had been flying at such an altitude or the reason for such low flight.

The weather in the area and at the time of the accident was satisfactory for contact flight.

The evidence indicated that no landing was being attempted at the time.

There was no evidence of sabotage.

There was no evidence of escaped barrage balloons or any other aircraft being in the vicinity at the time of the accident.

The crew personnel consisted of: Dale B. Francis, captain; Raymond R. Majors, first officer; and Dovie M. Holybee, stewardess.

Captain Francis, 39, was employed by American on Mar. 9, 1936, was assigned as first officer on Mar. 28, 1936, as a first officer and reserve captain on Aug. 17, 1939, and as a captain on Oct. 13, 1942. He held an airline transport pilot certificate with a multi-engine land, 900-2700 hp rating, and had accumulated about 13,050 flying hours, 7374 of which were while in the employ of American. Approximately 4798 hours of this time were on DC3 equipment. He had flown approximately 152 hours in the two months preceding the accident, and his last flight over the subject route was Feb. 8, 1944. He had his last instrument check on Dec. 7, 1943, and his last monthly qualification report was completed on Feb. 1, 1944. His last physical examination, required by the Civil Air Regulations, was passed on Oct. 12, 1943.

First Officer Majors, 25, held a commercial pilot certificate with a single-engine land, 90-270 hp rating. He was employed by American on Oct. 15, 1942, and was assigned as a first officer on Feb. 27, 1943. He had accumulated approximately 1911 hours of flight time, about 812 of which were in DC3 equipment while in the employ of American. His last physical examination, required by the Civil Air Regulations, was passed on June 18, 1943.

Stewardess Holybee, age 25, had been in the employ of American since Feb. 19, 1942.

## CAA Offers Airports To Local Authorities

(Continued from page 85)

contracting with commercial operators for operation of the fields.

The fields were developed and maintained by the Federal Airways Service of the CAA beginning in 1927, and were located along the airways to serve as emergency havens for the short range and the then less reliable aircraft. At the peak, the CAA maintained 900 small fields, but with improvement of aircraft those which were considered no longer necessary were returned to the owners.

Most of these fields have turf runways; a few have paved runways and none is equipped for fueling planes. Physical conditions of these emergency fields vary with locations and there is no standard formula for their leasing by would-be operators. Negotiations should be initiated with the regional administrator in the CAA region where the airport is located.

**Joint Operation**—A small number of fields already are being operated by the CAA and municipalities on a joint basis. Under this arrangement, the town is responsible for the airport surface and other facilities, the CAA for the beacon and other lighting. Communities participating in this plan include: Ardmore, Okla.; Battle Mountain, Nev.; Black Moshannon, Cove Valley, Lancaster and Mt. Pocono, Pa.; Chadron, Neb.; Clanton and Tuscaloosa, Ala.; Ft. Collins, Colo.; Glen Falls, N. Y.; Huntingburg, Ind.; Joliet and Rockford, Ill.; Kelso and Toledo, Wash.; Kingsville, San Benito and Sulphur Springs, Tex.; Kirksville and Lebanon, Mo.; Medicine Bow and Wheatland, Wyo.; Newark, Ohio; Valley City, N. D.; and Wilmar, Minn.

Listed here are the fields available to communities for airports, and the communities near which they are situated are:

Alabama.—Atmore, Gainesville, and Greenville.

Arizona.—Ashfork, Cochise, Deep Lake, Holbrook, Maine, Red Rock, Salome, Seligman, Tonopah and Winona.

Arkansas.—Arkadelphia, Brinkley, and Luxera.

California.—Auburn, Bagdad, Blue Canyon, Delta, Desert Center, Dunsmuir, Newhall, Silver Lake, Trona, Truckee, and Williams.

Colorado.—Akon, Alvin, and Lamar.

Connecticut.—Putnam.

Florida.—Crestview, Immokalee, Jasper, and Titusville.

Georgia.—Alma, Butler, Cochran, Folkston, Jackson, McRae, Siloam, Tallapoosa, and Winder.

Idaho.—Dubois, Idaho, Kellogg, Malad, Mtn. Home, and Strevell.

Illinois.—Bradford, Chesterfield, Effingham, Prairie Du Rocher, Van Orin, and Vandalia.

Indiana.—Goshen, Knightstown, McCool, Milroy, and Rensselaer.

Iowa.—Atlantic, Lamoni, Montezuma, and Stuart.

Kansas.—Anthony, Cassoday, Gardner, Lebo, and Syracuse.

Kentucky.—Glendale, Smiths Grove, and Warsaw.

Louisiana.—Arcadia, Covington, Donaldsonville, and Tallulah.

Massachusetts.—Pittsfield.

Michigan.—Big Rapids and Gladwin.

Minnesota.—Frontenac and Madison.

Mississippi.—Batesville, Corinth, Forest, Rockport, Tylertown, and Zeiglerville.

Missouri.—Advance, Brookfield, Knoxville, Luray, Marshall, Neosho, New Florence, Osborn, and Tarkio.

Montana.—Big Timber, Custer, Dell, Dillon, Drummond, Forsyth, Geyser, Lavina, Livingston, Mildred, St. Xavier, Superior, Townsend, and Whitehall.

Nebraska.—Big Spring, Brainard, Hayes Center, Overton, and Sidney.

Nevada.—Buffalo Valley, Fernley, Gabbs Valley,

## CAA Statement on Airport-Spacing Standards

(See first page for further details)

These standards are based upon present knowledge of safety requirements necessary in the light of future anticipated air traffic and the probable methods of controlling such traffic, including possible future developments in air navigation aids. It is appreciated that deviations from these standards will not only be necessary but will be desirable and entirely feasible where air traffic flow patterns for local areas are or can be established or traffic is controlled.

Airports at which instrument operations are to be conducted simultaneously will require sufficient separation from center to center to prevent conflict and overlapping in the holding and approach patterns during simultaneous instrument approaches.

**Contact Operations**—For strictly contact operations, airports should be located far enough apart so their respective contact traffic patterns will not conflict. As a general guide the sizes of the various contact traffic patterns for the different classes of airports may be considered as follows: Class 1—1-mile radius; Class 2—2-mile radius; Class 3—3-mile radius; Class 4 or larger—4-mile radius.

When the location of a contact airport with respect to an instrument airport is based upon minimum distances permissible for contact operations as listed above, it is understood that the contact airport operations may be limited for safety reasons during such times as the instrument operations are being conducted. Such limitations should be worked out by Federal, state, and local aviation officials when establishing the air traffic pattern for the local area.

It is not feasible to consider existing airway radio range facilities in the planning of airports in the urban areas, in view of the prospective changes in the character of air navigation radio aids and the impermanence of the location of the existing airway radio facilities. However, in selecting sites for new airports consideration must be given to existing and proposed instrument landing systems.

Humboldt, Mormon Mesa, Ventosa, Wells, and Winnemucca.

New Mexico.—Acomita, Anton Chico, Columbus, Cuervo, El Morro, Engle, Hachita, Mt. Riley, Otto, and Rodeo.

New York.—Ft. Plain, Newark, and Ticonderoga. North Carolina.—Warrenton.

North Dakota.—Ashley, Dawson, Glen Ullin, Golva, Pembina, and Washburn.

Ohio.—Archbold, Cambridge, Cherry Fork, Coldwater, Hayesville, Perry, Port Clinton, and Vermillion.

Oklahoma.—Claremore, Dill, Guthrie, and Stroud. Oregon.—Arlington, Beaver Marsh, Cow Creek, Myrtle Creek, and Roseburg.

Pennsylvania.—Barnesville, Brookville, and Bucks-town.

South Carolina.—Ellerbe, Parler, and Lane.

South Dakota.—Miller and Philip.

Tennessee.—Crossville, Gallatin, Graham, Jacks Creek, Manchester, Morristown, Smithville, and Whiteville.

Texas.—Adrian, Arlie, Austwell, Delaware Springs, Dryden, Hammond, Harpersville, Hawkins, Hudspeth, Navasota, Pampa, Parker, Pawnee, Raymondsville, Salt Flat, San Marcos, Simms, Temple, Twitty, Vernon, Westbrook, Wills Point, and Yoakum.

Utah.—Enterprise, Fairfield, Grantsville, Knolls, Lucin, Milford, and Promontory Point.

Virginia.—Chilhowie, Gordonsville, Lively, Milford, and Pulaski.

Washington.—Easton, Harrington, Lacrosse, and Toledo.

West Virginia.—Petersburg and Sutton.

Wisconsin.—Brodhead, La Crosse, and Lone Rock.

Wyoming.—Buffalo, Douglas, Ft. Bridger, Kemmerer, Knight, Pine Bluffs, Sinclair, Sussex, and Wamsutter.

## Fifth of CAA Personnel Serve in Armed Forces

The Civil Aeronautics Administration has kept pace with other Government agencies in the enlistment of its personnel in the armed forces.

During the years 1939 through 1945, a total of 1,961 men and 70 women, almost 20 percent of its personnel, left the CAA to join various branches of the military services. In one day, 95 reserve officers of the Safety Regulations Division were called to the colors. The Division staggered momentarily under this sudden depletion of personnel but recovered and continued to function.

Of the 2,031 men and women who joined the service, 49 men and 3 women have returned and have been restored to duty with the CAA.

A total of 15 CAA employees have died in the service of our country.

In addition to those who joined the service, many CAA employees have aided the war effort by their technical contributions, in a civilian capacity, in remote corners of the earth, from Brazil to Burma and from Attu to Kwajalein, serving as airway construction engineers, air traffic controllers, aircraft communicators and maintenance engineers.

## Research Council

(Continued from page 86)

used now at the latter institution, hidden in the baggage compartments of planes operated by the Institute of Aviation Psychology.

Working with the CAA Office of Safety Regulation, the committee has been developing more reliable methods for rating pilot proficiency, using the airborne recorder and camera as a checking device.

A current project of the committee is the analysis of aviation accidents in relation to the training program. The frequency with which fatal accidents are associated with stalls, particularly those growing out of turns at low altitudes suggests, the committee report says, "a shift in emphasis during training from precision entries and execution of stalls and spins to training in the avoidance of and immediate recovery from the stall condition, possibly through extended practice in slow flying."

In its report, the committee also details projects which had negative but valuable results, in that they eliminated pilot selection methods which were invalid or wasteful, thus avoiding "the imposition upon the military services and upon the CAA of costly and cumbersome procedures which would drain available resources without adequate return."

## OFFICIAL ACTIONS

## Civil Aeronautics Board

### Airline Orders

#### Service

No. 3765 dismisses, upon the request of Transcontinental & Western Air, their application for amendment of a certificate—Docket 1033. (June 25.)

No. 3766 dismisses, upon the request of Penn-Ohio Coach Lines Co., South Suburban Safeway Lines, Gordons North South Air Lines and Transcontinental & Western Air, their applications for certificates in the proceeding known as the Great Lakes Area Case. (June 25.)

No. 3768 permits National Airlines to serve St. Petersburg, Fla., and Philadelphia, Pa., on July 1, through the use of the Pinellas County Army Air Field and the Philadelphia-Northeast Airport respectively. (June 26.)

No. 3770 authorizes American Export Airlines and Transcontinental & Western Air to engage in foreign air transportation to designated points for 7 years; further amends the amended certificate issued to Pan American Airways in Docket 713; designates New York, Boston, Chicago, Philadelphia, Washington, D. C., and Detroit as co-terminals for the three airlines in the United States; applications of other airlines denied. (Issued with an opinion June 1—signed by the President—July 3.)

No. 3771 dismisses, upon the request of Pan American-Grace Airways, their application for a certificate. (June 26.)

No. 3772 grants the Department of Justice, and the Cities of St. Louis, Detroit, and Indianapolis, permission to intervene in the Great Lakes Area Case. (June 26.)

No. 3773 denies petition of Continental Air Lines insofar as it requests the severance of United Air Lines' application from the proceeding known as the Great Lakes Area Case; grants Continental permission to intervene in the proceeding. (June 26.)

No. 3774 severs that portion of the application of Colonial Airlines requesting a certificate authorizing service between Cincinnati, New York-Newark via Pittsburgh and Reading from Docket 1910 and assigns it Docket 1942; consolidates applications of Penn-Central, Docket 1921, and Colonial, Docket 1942, into the proceeding with Docket 221 et al.; dismisses application of Penn-Central—Docket 1788. (June 26.)

No. 3780 rescinds order No. 1831 which authorized Transcontinental & Western Air to temporarily suspend service on route No. 44 between Chicago and Newark-New York. (June 28.)

No. 3781 grants Eastern Air Lines permission to serve Philadelphia, on routes Nos. 5 and 6, on July 1, through the use of the Philadelphia-Northeast Airport. (June 28.)

No. 3782 grants Chicago & Southern permission to serve Fort Wayne, Ind., through the use of Baer Field. (June 28.)

No. 3783 orders that Braniff Airways be notified that the national defense no longer requires delaying inauguration of service to and from Lubbock, Tex. (June 28.)

No. 3784 denies Pan American's request for temporary exemption from the provisions of sec. 401 of the Civil Aeronautics Act. This section prohibits Pan-Am from suspending service on its Fairbanks-Nome route to and from the intermediate points Hot Springs, Kokrines, Ruby, Koyukuk, Nulato and Golovin, Alaska. (June 28.)

No. 3785 grants Braniff Airways permission to serve Lubbock, Tex., on July 1, through the use of the South Plains Army Air Field. (June 30.)

No. 3787 permits Transcontinental & Western Air to inaugurate non-stop service, on or about July 1, between Kansas City, Mo., and Los Angeles, Calif., on route No. 2. (June 30.)

No. 3789 permits Penn-Central to serve New York, N. Y., on July 2, through the use of La Guardia Field. (June 30.)

No. 3790 orders that National Airlines be temporarily exempted from the provisions of sec. 401 of the Act, insofar as they would prevent National from carrying local air mail between New York and Philadelphia on inaugural flights on or about July 1. (June 30.)

No. 3793 permits Pennsylvania Central Airlines to inaugurate non-stop service on July 2 between Birmingham and Knoxville on route No. 55. (July 2.)

No. 3794 permits Transcontinental & Western Air and Braniff Airways to intervene in the proceeding concerning American Airline's application for authority to inaugurate non-stop service between Oklahoma City and Tucson and between Oklahoma City and Phoenix. (July 3.)

No. 3799 consolidates three applications of Cordova Air Service into a single proceeding. The applications request that Cordova's certificate be amended so as to authorize the transportation of mail in Interior Alaska. (July 3.)

No. 3805 amends the Board's order of May 9, Docket C-14, by striking paragraph 2 which concerned the carrying of passengers or property by Pan American. (July 3.)

No. 3806 orders that Aero-Transportes, S. A., be issued a temporary foreign air carrier permit authorizing it to engage in foreign transportation between Monterrey, Mex., and Brownsville, Tex. The permit is effective from June 29 and shall continue for one year. (Issued with an opinion—June 18.)

No. 3807 grants National Airlines permission to serve Charleston, S. C., on July 1, through the use of the Charleston Army Air Base. (July 3.)

No. 3808 temporarily exempts Ray Peteren Flying Service from the provisions of Title IV of the Act, insofar as they would prevent the air carrier from temporarily performing the service which Bristol Bay Air Service is authorized to perform; temporarily exempts Bristol Bay Air Service from the provisions of Title IV of the Act, insofar as they would require the carrier to render service under the terms of their certificates; subject to certain provisions, directs that this order and the exemption granted shall continue in effect for 60 days. (July 3.)

No. 3809 rescinds order No. 2601 which temporarily suspended service by All American Aviation, American Airlines, Eastern Air Lines, Transcontinental & Western Air, and United Air Lines at the Philadelphia Municipal Airport. (July 3.)

No. 3810 rescinds order No. 1771 which temporarily suspended service on Eastern Air Line's route No. 6 at Brunswick, Ga. (July 3.)

No. 3812 amends certificate of Alaska Airlines so as to authorize the air carrier to engage in transportation between the terminal points Anchorage and Fairbanks; approves transfer of the certificate held by Arthur G. Woodley, individually, to a partnership composed of Arthur G. and Letha M. Woodley and Mary E. Diamond, doing business as Woodley Airways; amends certificate of Woodley Airways so as to authorize engaging in

air transportation between the terminal points Anchorage (or Seward) and Kodiak; denies other applications of Alaska Airlines and Woodley Airways. (Issued with an opinion—June 12.)

No. 3813 rescinds order which directed that Transcontinental & Western Air's application for a temporary certificate authorizing foreign air transportation between Washington, D. C. and



Cairo, Egypt, and all proceedings related thereto, be accorded confidential treatment. (July 5.)

No. 3814 cancels, as of July 5, the temporary certificate which authorized Transcontinental & Western Air to engage in foreign air transportation between Washington, D. C. and Cairo, Egypt. (July 5.)

No. 3815 permits Alaska Airlines to intervene in the proceeding concerning Trans-Canada Air Lines' application for a foreign air carrier permit. (July 6.)

No. 3820 rescinds order No. 2028 which exempted Pan American Airways, under the authority of sec. 416 of the Act, from certain terms, conditions and limitations contained in its certificate. (July 6.)

No. 3821 dismisses, upon the request of Automatic Air Mail, their application for a certificate. (July 6.)

No. 3822 dismisses, upon the request of Kansas Aviation Co., their application for a certificate. (July 6.)

No. 3823 denies United Air Line's petition to reopen the matter of its proposed non-stop service between Fresno and Sacramento, Calif. (July 6.)

No. 3824 permits the Cities of Goldsboro and Winston-Salem, N. C., Waycross and Columbus, Ga., and Forsyth County, N. C., to intervene in the Southeastern States Case—Docket 501 et al. (July 6.)

No. 3825 consolidates applications proposing new and additional air service in the general area embracing the States of Kansas, Missouri, Arkansas, Louisiana, and Mississippi into a single proceeding known as the Mississippi Valley Case—Docket 548 et al. (July 6.)

No. 3826 permits the Minneapolis-St. Paul Metropolitan Airports Commission to intervene in the North Central Case—Docket 415 et al. (July 9.)

No. 3830 permits Eastern Air Lines, the City of Philadelphia, and the County of Allegheny to intervene in the applications of Transcontinental and Western Air, Inc., et al for certificates. (July 9.)

No. 3835 permits Pan American to serve Charlotte Amalie, St. Thomas Virgin Islands on or about July 15, through the use of Bourne Field. (July 13.)

No. 3836 authorizes Pan American to suspend service temporarily to and from Santiago, Cuba, until the further order of the Board. (July 13.)

No. 3837 permits the City of Waterloo to intervene in the proceeding known as the North Central Case—Docket 415 et al. (July 13.)

No. 3838 permits the City of Jacksonville, Fla., to intervene in the proceeding known as the Southeastern States Case—Docket 501 et al. (July 13.)

No. 3840 orders that the record in the Rocky Mountain States area case—Docket 152 et al.—be reopened and assigned for further hearing before an Examiner of the Board for the purpose of taking testimony and receiving other evidence in support of the applications of Midwest Airways in Dockets 700 and 1071. (July 13.)

No. 3841 consolidates various applications proposing additional air transportation services in the so-called Middle Atlantic Area. (July 14.)

No. 3842 orders that an investigation be and it is instituted with respect to the activities of Trans-Marine Airlines, Inc. for the purpose of determining whether in the conduct of such services it has failed to comply with any provisions of sec. 401 of the Act. (July 17.)

No. 3848 permits Jim Dodson Air Service to intervene in the application of Northern Airways for approval of the transfer of a certificate. (July 17.)

No. 3851 permits TWA and National Airlines to intervene in the proceeding known as the Kansas City-Memphis-Florida Case—Docket 1051 et al. (July 17.)

No. 3852 consolidates various applications proposing additional air transportation services in the general area between Kansas City-Memphis-Florida into a single proceeding—Docket 1051 et al.

### Miscellaneous

No. 3763 orders that "a proceeding be and it is instituted by the Board upon its own motion" re Government travel discount provisions and the Universal Air Travel Plan of certain air carriers; suspends the use of certain tariffs for 90 days. (June 23.)

No. 3764 institutes an investigation to determine whether National Airlines has acquired control of Caribbean-Atlantic Airlines without Board approval; consolidates the complaint of Inter-American Airlines against National and Caribbean-Atlantic, the application of National and Caribbean-Atlantic, and an agreement (Contract CAB No. 383) by and between these two airlines into one proceeding. (June 25.)

No. 3767 institutes an investigation re Government travel discount tariff provisions of Pan American Airways, Pan American-Gate Airways, Unibra, Medellin and Central Airways and Cia Mexicana de Aviacion, S. A. (June 25.)

No. 3769 approves acquisition of control of American Export Airline by American Airlines with the exception of paragraph 8 of the agreement which is disapproved. (Issued with an opinion—June 25.)

No. 3779 approves interlocking relationships existing as the result of Walter S. McLucas holding the positions of Director—American Airlines, Peru Marquette Railroad Co., and Detroit & Cleveland Navigation Co. (June 26.)

No. 3788 cancels paragraphs 2 and 3 of order No. 3763 and

substitutes new paragraphs 2 and 3 re the Universal Air Travel Plan Tariff. (June 30.)

No. 3795 approves an agreement by and between Northeast Airlines and United Air Lines relating to emergency radio repair service to United's aircraft at La Guardia Field, N. Y. (July 3.)

No. 3796 approves an agreement by and between Northeast and United relating to emergency radio repair service to United's aircraft at General Logan Field, Boston, Mass. (July 3.)

No. 3797 approves interlocking relationships of Alonso Petteys as Director—Northwest Airlines, Inc., and Denver Tramway Co. (July 3.)

No. 3798 approves interlocking relationships of Travis Oliver as Director and Treasurer of Delta Air Corp. and Director of Arkansas & Louisiana Missouri Railway Co. (July 3.)

No. 3828 approves interlocking relationships of John J. Mitchell as Director—United Air Lines, Chicago Tunnel Terminal Corp., Chicago Tunnel Co., and Chicago Tunnel Terminal Co. (July 3.)

No. 3811 approves an agreement by and between Northwest Airlines and National Airlines relating to sublease of space for installation of radio equipment by Northwest to National at New York. (July 3.)

No. 3831 approves interlocking relationships of Harry S. Parker, Jr. as Vice-President and Director of National Airlines and as a limited partner of United Export Lines. (July 9.)

No. 3832 approves interlocking relationships of George W. Gibbs, Jr., as Director of National Airlines and Vice-President and Director of Gulf Atlantic Transportation Co. (July 9.)

No. 3833 approves interlocking relationships of G. T. Baker as President, Director and Chairman of the Board of National Airlines and Vice-President and Director of Gulf Atlantic Transportation Co. (July 9.)

No. 3834 approves an agreement by and between United Air Lines and Northeast Airlines, Inc., relating to the furnishing of storage facilities for gasoline at La Guardia Fld., N. Y. (July 12.)

No. 3839 approves an agreement by and between Northwest Airlines and Pennsylvania-Central Airlines relating to the air-conditioning of Northwest's planes at Milwaukee and New York City. (July 13.)

No. 3847 denies the motion of Page Airways to defer action in the proceeding instituted by Board Order No. 3682. (July 17.)

No. 3849 grants the National Aviation Trades Association permission to intervene in the proceeding concerning certain activities of Page Airways, Inc. (July 17.)

No. 3850 approves an agreement by and between United Air Lines and American Airlines relating to use of United's cleaning unit at Washington National Airport by American. (July 17.)

No. 3853 approves interlocking relationships of James Bruce as Director of both American Airlines and American-Hawaiian Steamship Co. (July 17.)

### Airman Orders

#### Suspensions

No. 3775 suspends student certificate of Hardy Rhyne for 6 months because she flew between Panama City and Marianna, Fla., without having been certified for cross-country solo flight; Rhyne also flew between sunset and sunrise without carrying and displaying certified position lights. (June 27.)

No. 3776 suspends student certificate of Evelyn Rhyne for 6 months because she flew between Panama City and Marianna, Fla., without having been certified for cross-country solo flight; she also flew between sunset and sunrise without carrying and displaying certified position lights. (June 27.)

No. 3800 suspends student certificate of John Robert Sharkey because he flew at an altitude of less than 500 feet in the vicinity of Clinton, Ill.; he also failed to make a prompt written report of an accident to the Board. (July 3.)

No. 3801 suspends student certificate of Harry Cochran Redding for 6 months because he flew at an altitude of less than 500 feet in the vicinity of Sapulpa, Okla. (July 3.)

No. 3802 suspends student certificate of Don A. Herendeen for 6 months because he flew at an altitude of less than 500 feet in the vicinity of Beaver Dam Lake, Ind. (July 3.)

No. 3803 suspends private certificate of Walter A. Varney for 6 months because he performed acrobatics at a height of less than 1,500 feet and violated other provisions of the Civil Air Regulations. (July 3.)

No. 3815 suspends student certificate of Raymond A. Wilson for 6 months because he flew at an altitude of less than 1,000 feet over a congested area. (July 6.)

No. 3818 suspends commercial certificate of William L. Morse for 60 days because he flew at an altitude of approximately 150 feet above the water and violated other provisions of the Civil Air Regulations. (July 6.)

No. 3827 suspends student certificate of John C. Marshall for 90 days because he carried passengers on two occasions, contrary to the provisions of sec. 20.720 of the Civil Air Regulations. (June 29.)

No. 3843 suspends student certificate of Henry E. Sickler for 3 months because he piloted an aircraft on a cross-country solo flight and beyond the operating base of his instructor when his certificate had not been endorsed for such flight. (July 17.)

#### Revocations

No. 3778 revokes student certificate of Hinemon L. Abercrombie because he carried a passenger who was not a certificated instructor and violated other provisions of the Civil Air Regulations. (June 27.)

No. 3785 revokes student certificate of Ralph W. Miller, Jr., because he carried a passenger who was not a certificated instructor and violated other provisions of the Civil Air Regulations. (June 29.)

No. 3791 revokes commercial certificate of Dorothy J. Allen because she carried a passenger when neither she nor her passenger was properly certificated for such operation, and in addition flew over a congested area of Salt Lake City, Utah, at an altitude of less than 500 feet. (June 29.)

No. 3792 revokes commercial certificate of John H. Newman because he failed to file a flight plan in accordance with sec. 60.130 of the Civil Air Regulations and in a visual-contact night flight failed to show position lights. (June 29.)

No. 3826 revokes student certificate of Alvin E. Young because

(a) a minimum airway civil air  
flight  
(b) During trip over schedule  
This

## Official Actions

(Continued from preceding page)

he carried passengers who were not certified instructors. (June 29.)

No. 3844 revokes student certificate of Charles P. Chesnet because he flew at an altitude of less than 500 feet over a congested area. (July 17.)

No. 3845 revokes student certificate of Homer H. Stearns because he carried a passenger and violated other provisions of the Civil Air Regulations. (July 17.)

### Miscellaneous

No. 3777 orders that ..... be issued a third-class medical certificate with the restriction that such certificate shall not be effective during the period from August 5 to September 15 of each year. (June 27.)

No. 3804 orders that ..... be issued a second-class medical certificate. (July 3.)

No. 3816 orders that a second-class medical certificate be issued to ..... specifies that the certificate shall state that ..... does not meet the appropriate physical standards prescribed by sec. 29.11(a), subsections (1) and (2) of the Civil Air Regulations, but that his physical deficiencies were found to be compensated by his demonstrated aeronautical experience, ability, and judgment. (July 6.)

No. 3817 orders that John M. Penning be issued an aircraft dispatcher certificate if he meets the requirements of sections 27.10, .11, .12, .13, .14, and .16 of the Civil Air Regulations. (July 6.)

No. 3846 orders that ..... be issued a third-class medical certificate and that a notation of his structural defects be noted thereon. (July 12.)

Note: It is Board policy to omit names in cases of physical disability.

### Regulations

**Amdt. 26-1** ..... Effective August 1, 1945

Amending Part 26 of the Civil Air Regulations to conform with Parts 20 and 60:

1. By striking the second sentence of § 26.3 reading: "The passing grade in any subject shall be at least 70 per cent." 2. By amending § 26.4 to read as follows:

**26.4 Duration.** An air-traffic control-tower operator certificate will continue in effect until suspended or revoked or a termination date is set by the Board.

3. By repealing §§ 26.41, 26.42, and 26.43.

4. By amending § 26.50 to read as follows:

**26.50 Exercise of authority.** A control-tower operator at an airport in a control area must not issue a traffic clearance for flight under contact flight rules when weather minimums are less than those prescribed in Part 60 of the Civil Air Regulations unless he receives the approval of the appropriate control center. In addition, an operator with a junior rating must not exercise that authority without the consent of an operator with a senior rating on duty and present in the tower when the clearance is given.

5. By amending § 26.51 to read as follows:

**26.51 Emergency authority.** An operator with a junior rating must not serve as such except under the supervision of an operator with a senior rating. However, in an emergency the operator in charge of the control tower may authorize an operator with a junior rating to serve during the emergency, if either operator immediately notifies the regional administrator of the Civil Aeronautics Administration of the existence of the emergency and the facts and circumstances surrounding it. Whenever the Administrator finds, in the interest of safety, that this authority should not be continued, it shall terminate upon notification by the Administrator.

**Reg. 278-B** ..... Effective June 27, 1945

"Special Civil Air Regulation Serial Number 278," authorizing the issuance of assistant airline transport pilot certificates, "is amended by striking the words 'June 30, 1945' and inserting in lieu thereof the words 'December 31, 1945.'"

**Reg. 336** ..... Effective June 1, 1945

**Noncompliance with § 40.2611 (b) of the civil air regulations with respect to the approved route of Northwest Airlines, Inc., between Milwaukee, Wisconsin, and New York, N. Y.** Any first pilot listed in the Northwest Airlines, Inc., air carrier operating certificate on May 1, 1945, will be deemed to have met the requirements prescribed by § 40.2611 (b) of the Civil Air Regulations with respect to the piloting of aircraft in scheduled air transportation on the approved route between Milwaukee, Wisconsin, and New York, N. Y., when he has completed 4 one-way trips over the route as first pilot without passengers or as second pilot with or without passengers and 2 one-way trips as an observer from the cockpit. This regulation shall terminate September 1, 1945.

**Reg. 337** ..... Effective June 12, 1945

**Noncompliance with 40.2611 (b) with respect to certain routes operated by Pennsylvania-Central Airlines in the Chicago area.** Any first pilot listed in the Pennsylvania-Central Airlines Corporation air carrier operating certificate on December 1, 1944, will be deemed to have met the route requirements of 40.2611 (b) of the Civil Air Regulations for the piloting of aircraft in scheduled air transportation over the following routes: Detroit-Chicago, via Red civil airway No. 12; Detroit-Milwaukee, via Flint and/or Lansing, Grand Rapids, and Muskegon; Grand Rapids-Chicago, via Red civil airway No. 26; Muskegon-Chicago, via Benton Harbor and Red civil airway No. 28; Chicago-Milwaukee (alternate), via Amber civil airway No. 5; Provided, That each pilot makes the following qualifying trips:

(a) 6 one-way trips between Detroit and Chicago, of which a minimum of 2 one-way trips shall be made (1) via Red civil airway No. 12 and (2) via Green civil airway No. 2 and Red civil airway No. 28, one of such trips having been made via Flint, Michigan;

(b) 2 one-way trips between Grand Rapids and Milwaukee. During the above trips the pilot shall make at least one round trip over each principal route with a landing and take-off at each scheduled stop.

This regulation shall terminate September 1, 1945.

## AIR REGULATIONS . . . As of August 1, 1945

TITLE	PART NO.	PRICE		DATE LATEST EDITION		NO. AMENDMENTS ISSUED	
		Part	Manual	Part	Manual	Part	Manual
<b>Aircraft</b>							
Airworthiness Certificates	01	\$0.05	None	10/15/42	None	1 <sup>2</sup>	
Type and Production Certificates	02	.05	\$0.10	3/1/41	3/15/45		
Airplane Airworthiness	04	.15	.45	11/1/43	7/1/44	3	
Engine Airworthiness	13	.05	None	8/1/41	None		
Propeller Airworthiness	14	.05	.15 <sup>3</sup>	7/15/42	6/1/45		
Equipment Airworthiness	15	Free	.10	4/15/44	7/1/38		
Radio Equipment Airworthiness	16	.05	Free	2/13/41	2/13/41	1	
Maintenance, Repair, and Alteration of Aircraft, Engines, Propellers, Instruments	18	.05	.50	9/1/42	6/1/43		
<b>Airmen</b>							
Pilot certificates	20	.05	None	7/1/45	None		
Airline Pilot Rating	21	.05	None	10/1/42	None	3	
Lighter-than-air Pilot Certificates	22	.05	None	10/15/42	None	1	
Mechanic Certificates	24	.05	None	7/1/43	None		
Parachute Technician Certificates	25	.05	None	12/15/43	None		
Traffic Control Tower Operator Certificates	26	.05	None	2/1/44	None	1	
Aircraft Dispatcher Certificates	27	.05	None	10/1/43	None	1	
Physical Standards for Airmen	29	.05	None	6/1/42	None	3	
<b>Air Carriers</b>							
Air Carrier Operating Certification	40	.10	None	10/10/44	None	2	
Scheduled Air Carrier Operations Outside Continental U. S.	41	Free	None	9/1/45	None	1	
Foreign Air Carrier Regulations	44 <sup>3</sup>	.05	None	7/1/45	None		
<b>Air Agencies</b>							
Flying School Rating	50	.05	Free	11/1/40	12/40	3	2
Ground Instructor Rating	51	.05	None	12/15/43	None		
Repair Station Rating	52	.05	Free	10/1/42	2/41		
Mechanic School Rating	53	.05	(1)	8/1/42	5/40		
Parachute Loft Certificates and Ratings	54	.05	None	1/21/43	None		
<b>Air Navigation</b>							
Air Traffic Rules	60	.05	.15	8/1/45	8/1/43	1	
Scheduled Air Carrier Rules	61	.10	None	2/1/44	None	4	
<b>Miscellaneous</b>							
General Operation Rules	43	.05	None	7/1/45	None	1	
Transportation of Explosives and other Dangerous Articles	49	.05	None	7/1/45	None		
Rules of Practice Governing Suspension and Revocation Proceedings	97	Free	None	7/6/45	None		
Definitions	98	.05	None	10/15/42	None		
<b>Regulations of the Administrator</b>							
Aircraft Registration Certificates	501	Free	None	3/31/43	None		
Recordation of Aircraft Ownership	503	Free	None	3/31/43	None		
Seizure of Aircraft	531	Free	None	12/8/41	None		
Regulations Governing the Distribution and Use of Aviation Gasoline	534	Free	None	9/16/44	None		

<sup>1</sup> Out of stock. <sup>2</sup> Special regulation No. 223, Dept. of Commerce, Washington 25, D. C.

<sup>3</sup> This supersedes former Part 66. <sup>4</sup> Obtain from Division of Publications, Government Printing Office, Washington 25, D. C.

Note: Those parts and manuals for which there is a price are obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Remittances must be by cash or by money order, payable to the Superintendent.

**Reg. 338** ..... Effective June 19, 1945

Any first pilot listed in the United Air Lines, Inc., air carrier operating certificate on June 1, 1945, as qualified over the approved route between Cleveland and New York will be deemed competent to pilot aircraft in scheduled air carrier operation over the route between Philadelphia, Pennsylvania, and Philadelphia, Pennsylvania, and between Philadelphia, Pennsylvania, and New York, N. Y., if he has made such landings and simulated instrument approaches at Philadelphia, Pennsylvania, as the Administrator may require to demonstrate his familiarity with procedures prescribed for operations at the Philadelphia airport.

This regulation shall terminate October 1, 1945.

**Reg. 339** ..... Effective July 1, 1945

Ten check pilots who are listed as first pilots in the Pennsylvania-Central Airlines Corporation air carrier operating certificate of June 1, 1945, will be deemed competent to pilot aircraft in scheduled air transportation over the Pennsylvania-Central Airlines approved route between Pittsburgh, Pennsylvania, and New York, New York, if in lieu of the 6 one-way trips required by § 40.2611 (b) they complete 4 one-way trips over this route as a first pilot without passengers or as a second pilot with or without passengers and comply in all other respects with the prescribed route requirement qualifications set forth in the Civil Air Regulations.

This regulation shall terminate October 1, 1945.

**Reg. 340** ..... Effective June 19, 1945

A mechanic certificate with a propeller or aircraft appliance rating, excepting a parachute rating, may be issued by the Administrator of Civil Aeronautics to an individual who is employed and designated by either a manufacturer holding a currently effective propeller or aircraft appliance production certificate or by an applicant for, or the holder of, a repair station certificate with a propeller or aircraft appliance rating. The individual must be in direct charge of the inspection, overhaul, or repair of propellers or aircraft appliances and his experience and employment record must indicate that he is competent to engage in such activity. The individual to whom a certificate is issued shall exercise the privileges of his certificate only with respect to the work performed for such manufacturer or repair station and through the use of facilities provided by the manufacturer or repair station.

This regulation and the certificates issued in accordance with it shall terminate December 31, 1945.

## Air Freight Service Started

### For Five Cities by the TWA

Transcontinental and Western Air began air freight service linking five principal cities on its coast-to-coast route July 1, R. E. Whitmer, director of cargo sales for TWA announces.

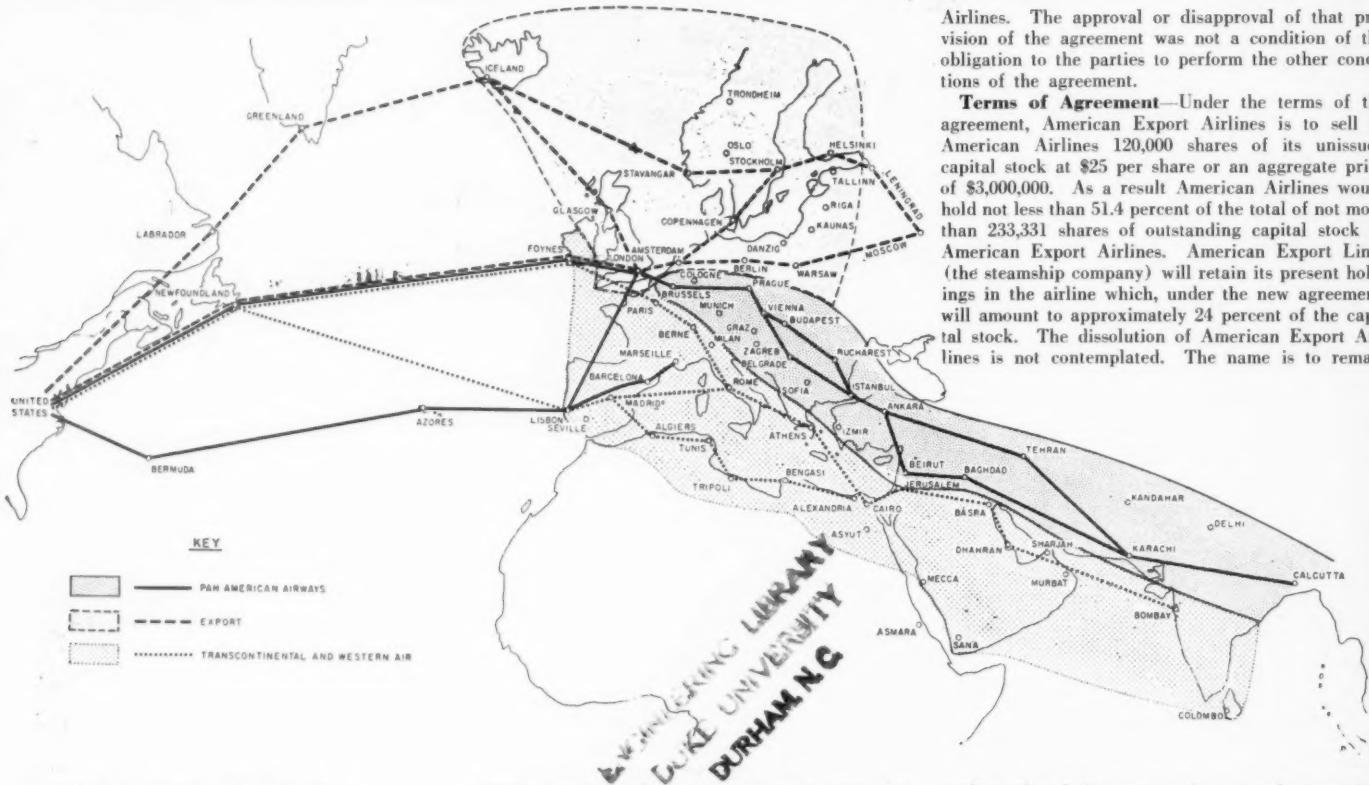
The program, on an experimental basis, offers the first lowered air cargo rates for airport-to-airport shipments. The service will be restricted to the New York, Chicago, Kansas City, Phoenix, and Los Angeles markets. As more equipment becomes available, other TWA stations will be added.

"Air freight will move on a deferred basis after passengers, mail, and air express, which will continue the most expedited type of service," Whitmer explained. "However, its movement will be faster than the fastest surface transportation, but lower in cost than air express because of its deferred nature. Commodities will be in four classifications, ranging between 30 cents and 50 cents per ton mile. Final cost of the service will be determined by which of three types of delivery—airport-to-airport, city depot, or door-to-door—is selected by shipper or receiver."

### Seeks Mail Service Authorization

The Alaska Airlines has asked the Civil Aeronautics Board to amend its certificate so as to include Noana and Minchumina as intermediate stops and to authorize mail transportation to those places.

## North Atlantic Decision Establishes International Air Routes



### International Routes

(Continued from first page)

temporary certificate, has heretofore been authorized to provide service to Lisbon, Portugal, and Foynes, Eire. The new certificate authorizes American Export to operate services via Labrador, Greenland, and Iceland to Stavanger, Stockholm, Helsinki, Leningrad, and Moscow, and via Newfoundland to Foynes, Glasgow, London, Amsterdam, Copenhagen, Berlin, Warsaw, and Moscow.

**Flies Northern Course**—Transcontinental & Western Air is authorized to operate from points in the United States through Newfoundland and thence over a northern leg to Foynes, Paris, Berne, Rome, Athens, Cairo, Jerusalem, Basra, Dhahran, and Bombay; and over a southern route to Lisbon, Madrid, Algiers, Tunis, Tripoli, Bengasi and Cairo. It is also permitted to operate over a southern route via Lisbon and Madrid to Rome, where it connects with services over the northern leg of its route.

In reaching a decision to permit domestic air carriers to engage in international air transportation, the Board recognized that such an operation would have some adverse competitive effect upon an international air carrier whose operations are limited to border ports of entry. It pointed out, however, that insofar as Pan American is concerned, this competitive disadvantage has been minimized to some extent by authorizing that company to conduct operations to Chicago, Detroit, Boston, Philadelphia, and Washington, in addition to New York.

In the North Atlantic route case decision the Board is taking two steps toward recognizing the necessity for flexibility in the conduct of international air transportation services. It points out that there are many uncertainties which cannot be definitely determined at this time and, therefore, the service authorized should not be of a fixed and inflexible nature but should be of such character as to permit

necessary review and revision and at the same time provide a framework which will permit proper development of American international air transportation service.

**Certificates Limited to 7 Years**—Accordingly, the certificates are limited to a period of seven years from their effective date. In addition, the routes specified in the new certificates in this case are general route areas instead of the usual point-to-point pattern. Thus, for example, on its route beyond London to Calcutta, Pan American is authorized to serve in general the countries through which it operates subject to compliance with the laws of those countries and the regulations issued by the Board.

Within the general route areas the Board has prescribed an initial service plan setting forth intermediate and terminal points to which service is contemplated. With the Board's approval and upon compliance with its regulations a carrier may initiate changes in this service plan within the prescribed area.

In the separate decision permitting American Airlines to acquire control of American Export Airlines the Board held that the acquisition as provided for in the agreement between the two air carriers, would be in compliance with the Board's order of July 30, 1942, requiring American Export Lines (a steamship company), to divest itself of control of American Export Airlines. With the exception of one revision which the Board held to be adverse to the public interest as unduly restrictive, the Board approved the agreement between the two carriers. The Board disapproved the provision whereby American Airlines, and American Export Lines (the steamship company), agreed that, so long as they retained their respective interests in American Export Airlines, they would conduct operations in international air transportation, exclusive of operations on the North American continent only through American Export

Airlines. The approval or disapproval of that provision of the agreement was not a condition of the obligation to the parties to perform the other conditions of the agreement.

**Terms of Agreement**—Under the terms of the agreement, American Export Airlines is to sell to American Airlines 120,000 shares of its unissued capital stock at \$25 per share or an aggregate price of \$3,000,000. As a result American Airlines would hold not less than 51.4 percent of the total of not more than 233,331 shares of outstanding capital stock of American Export Airlines. American Export Lines (the steamship company) will retain its present holdings in the airline which, under the new agreement, will amount to approximately 24 percent of the capital stock. The dissolution of American Export Airlines is not contemplated. The name is to remain

unchanged and the company is to remain a separate corporate entity.

Referring to the certificate granted American Export Airlines and its approval of the acquisition of the airline by American Airlines, the Board said, "The plan presented by American and Export will permit utilization of the combined strength of these two companies, making use of the operating organization, experience and traffic-generating facilities of American in this country and the experience and organization gained by Export in its international air service."

### Chairman Pogue Talks To Transport Users

In his address before the National Aeronautic Association during the air transport users conference, L. Welch Pogue, Chairman of the Civil Aeronautics Board, urged adherence to the economic principles involved and also to give consideration to other factors such as, habit, education and cultural development.

"If you want to sell something, don't depend altogether on logic and sound economics," he said. "Find out what the people—the users—want so much they will give up something else to get it."

"Air transportation is young," Mr. Pogue continued, "not much more than twenty years old. But it is a precocious youth, full of inspiring promise. The total investment of domestic and international operators is about \$170,000,000 and the total investment of class one railroads alone is in excess of \$23,000,000,000."

As to the future of air transportation he said, "It is important that the attitude of the public toward aviation generally and air transportation in particular be such as to encourage the desire to use air transportation wherever advantages are to be gained."

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